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THE EARLY CHRISTIAN MONUMENTS
OF SCOTLAND



THE
EARLY CHRISTIAN MONUMENTS
OF SCOTLAND

A CLASSIFIED, ILLUSTRATED, DESCRIPTIVE LIST OF THE MONUMENTS,
WITH AN ANALYSIS OF THEIR SYMBOLISM AND ORNAMENTATION

BY

J. ROMILLY ALLEN, F.S.A., Hon. F.S.A. Scot.

AND

AN INTRODUCTION, BEING THE RHIND LECTURES FOR 1892

BY JOSEPH ANDERSON, LL.D., H.R.S.A., Hon. M.R.I.A.

ASSISTANT SECRETARY OF THE SOCIETY OF ANTIQUARIES OF SCOTLAND, AND
KEEPER OF THE NATIONAL MUSEUM OF ANTIQUITIES, EDINBURGH



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PREFACE.

THIS work is to a large extent the outcome of His Excellency the late Dr Robert Halliday Gunning's Queen Victoria Jubilee gift of £1000, through Professor Duns, D.D., to the Society of Antiquaries of Scotland, of which the annual interest (under the title of the Gunning Fellowship) was to be used "to help experts to visit museums, collections, or materials of archaeological science at home or abroad, for purposes of special investigation and research." The Council of the Society, who were constituted administrators of the trust, resolved to inaugurate the scheme in the jubilee year (1887) by an inspection and report of the condition and contents of the archaeological and ethnological departments of the various local museums in Scotland, and these were published in the *Proceedings of the Society* for the next year. Other reports upon the contents of museums in England and on the Continent followed. In 1890 the acting committee of the Council, considering the importance and interest of the study of the art and history of the Early Christian Monuments of Scotland, and that many new examples had been discovered since the issue by the Spalding Club of the last work on the subject, edited by Dr John Stuart in 1856 and 1867, while others therein described had been removed or lost sight of, resolved to submit to the Council a scheme for obtaining a general survey and description of the monuments, with the view of issuing, under the auspices of the Society, a work embodying the whole knowledge of the subject obtainable at the present time. The object of this survey they considered should be to include "a complete register of every such monument or fragment now existing in Scotland, whether previously described or not," and that photography

should be used for illustration as far as possible, together with detail drawings, and rubbings or squeezes when these were desirable. The means they recommended to the Council to carry this into effect were (1) by devoting three years (or more) of the Gunning Fellowship to the survey and descriptive register, and to procure the necessary photographs, rubbings, and detail drawings; (2) by devoting one year of the Rhind Lectureship to the general subject of the Early Christian Monuments of Scotland, the lectures being so framed as to constitute a general introductory treatise to be prefixed to the detailed descriptions and illustrations obtained under the Gunning Fellowship; and (3) that the work should be issued by the Society (separately from its annual volumes) in the way in which the work on *The Sculptured Monuments of Iona and the West Highlands*, by James Drummond, R.S.A., was issued. The scheme having been cordially approved and adopted by the Council and by Dr Guuning, Mr J. Romilly Allen was entrusted with the duty of the Survey under the Gunning Fellowship, and Dr Joseph Anderson was appointed to deal with the general results by means of the Rhind Lectureship for 1892.

But the amount and nature of the survey work to be accomplished proved in reality to be far greater and much more difficult than had been anticipated. The number of localities to be visited was, of course, approximately known, but the difficulty of procuring satisfactory illustrations, especially of the stones sculptured in relief, was most tantalising. In point of fact, photography from the stones themselves, in cases where the stone is unfavourably situated, or much weathered, or overgrown by lichen, is frequently unsuitable. To secure satisfactory results, the only effective method is by making casts and photographing from the cast, a course which could not be adopted on such a large scale on account of the expense which it would have involved, as well as the practical difficulty of dealing with so many casts of large-sized monuments. Still, a sufficient number of photographs were obtained to afford a representative set of plates of the monuments sculptured in relief, while the method adopted for the unshaped stones with incised sculpture was to make outline-drawings from rubbings reduced by photography.

The materials for description and illustration having been thus obtained, the preparation of the tables of the occurrence and distribution

of the symbols, and the analysis of the Celtic ornament embracing a representation and description of every pattern occurring on the monuments, had first to be completed by Mr Romilly Allen, in order that the descriptive part of the work might be freed from continual repetition by the substitution of a simple reference in each case to the number of the pattern in the analysis, as printed in Part II. This, involving as it did the careful study of the construction and development of all the patterns, and the drawing of over 1500 explanatory diagrams, was a work of time. A precise description of every existing monument, or fragment of a monument, had also to be prepared by Mr Romilly Allen, from the notes and rubbings made during the Survey, and these descriptions, with the relative illustrations, are included in Part III. The outline illustrations of the descriptive list, as far as page 212 of Part III., were prepared by Mr Romilly Allen, and after that were mostly made by Mr F. R. Coles, from Mr Allen's rubbings, reduced by photography.

Altogether, with upwards of 1700 figures of symbols and patterns of ornament in Part II., and upwards of 850 illustrations of the monuments in Part III., of which 200 are from photographs on 109 full-page plates, the whole number of illustrations in the book exceeds 2500; and the number of sculptured monuments or fragments included, which have not been previously described or figured, exceeds 120.

The Editors are indebted to Sir John Stirling-Maxwell for his cordial permission to reproduce many of the sculptured monuments of Govan from his privately-printed volume; to Rev. J. B. Mackenzie, Kenmore, for the use of his large collection of negatives of the sculptured monuments of the West Highlands and Islands, so far as they belong to the period embraced in this work; to the local photographers whose names are mentioned in connection with the illustrations from their photographs; to the late Dr A. Sutherland, Invergordon; the late Dr A. Macnaughton, Taynuilt; the late Mr James Macdonald, Huntly; and to the Right Hon. the Earl of Southesk, K.T.; the Rev. J. M. Joass, LL.D., Golspie; Mr D. Hay Fleming, LL.D., St Andrews; Mr Alex. Hutcheson, Broughty Ferry; Mr Erskine Beveridge, Dunfermline; Mr William Mackay, Inverness; Mr R. C. Graham of Skipness; Mr Hugh W. Young of Burghead; Mr F. C. Eeles, Stonehaven, and Mr R. Weir Schultz, architect, London, for much valuable assistance.

CONTENTS.

PREFACE,	PAGE v
--------------------	-----------

PART I.

GENERAL INTRODUCTION. THE RHIND LECTURES FOR 1892.

INTRODUCTION,	iii
THE INSCRIBED MONUMENTS,	xii
THE SYMBOLISM OF THE MONUMENTS,	xxxii
THE ART CHARACTERISTICS OF THE MONUMENTS,	iv
THE ART RELATIONS OF THE MONUMENTS,	lxviii
GEOGRAPHICAL DISTRIBUTION OF THE MONUMENTS, AND CONCLUSIONS,	cii
SUMMARY,	cxii
INDEX TO PART I.,	cxv

PART II.

GENERAL RESULTS OF THE ARCHÆOLOGICAL SURVEY OF THE MONUMENTS.

CLASSIFICATION OF THE MONUMENTS,	3
GEOGRAPHICAL DISTRIBUTION OF THE MONUMENTS BY CLASSES AND LOCALITIES,	5
POSITIONS OF THE MONUMENTS,	15
FORMS AND DIMENSIONS OF THE MONUMENTS,	22
ARRANGEMENT OF THE DESIGNS SCULPTURED ON THE MONUMENTS,	35
FORMS OF THE CROSSES ON THE MONUMENTS,	46
CLASSIFIED LIST OF THE SYMBOLS OCCURRING ON THE MONUMENTS,	57

	PAGE
LOCALITIES OF THE DIFFERENT SYMBOLS,	58
COMBINATIONS OF THE SYMBOLS ON EACH MONUMENT,	79
RELATIVE FREQUENCY OF OCCURRENCE OF THE SYMBOLS,	103
GEOGRAPHICAL DISTRIBUTION OF THE SYMBOLS, SINGLY AND IN COMBINATION,	106
THE ORNAMENTAL DESIGNS SCULPTURED ON THE MONUMENTS,	129
ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES OF THE PATTERNS,	202
ANALYSIS OF KEY-PATTERNS, WITH THE LOCALITIES OF THE PATTERNS,	308
ANALYSIS OF SPIRAL PATTERNS, WITH THE LOCALITIES OF THE PATTERNS,	363
SCROLL FOLIAGE SUBJECTS, WITH THE LOCALITIES OF THE PATTERNS,	404
ZOOMORPHIC ORNAMENT, WITH THE LOCALITIES OF THE SUBJECTS,	404
FIGURE SUBJECTS, WITH THE LOCALITIES OF THE SUBJECTS,	405
INSCRIPTIONS, CLASSIFIED, WITH THE LOCALITIES,	414
BOOKS OF REFERENCE ON HIBERNO-SAXON ART,	415

PART III.

CLASSIFIED, ILLUSTRATED, DESCRIPTIVE LIST OF THE
MONUMENTS, ARRANGED BY COUNTIES.

SHETLAND,	3
ORKNEY,	20
CAITHNESS,	27
SUTHERLAND,	38
ROSS,	55
INVERNESS,	95
HEBRIDES,	110
NAIRN,	115
ELGIN,	118
BANFF,	151
ABERDEEN,	157
KINCARDINE,	200
FORFAR,	205
PERTH,	282
FIFE,	343
KINROSS AND CLACKMANNAN,	375
ARGYLL,	377
BUTE,	407

CONTENTS.

xī

	PAGE
LINLITHGOW,	418
MID-LOTHIAN,	421
HADDINGTON,	428
BERWICK,	429
PEEBLES,	429
SELKIRK,	431
ROXBURGH,	432
DUMFRIES,	436
DUMBARTON,	451
RENFREW,	454
LANARK,	461
AYR,	473
KIRKCUDBRIGHT,	476
WIGTOWN,	480
APPENDIX,	505
INDEX OF LOCALITIES OF THE MONUMENTS,	519

LIST OF THE PLATES IN PART I.

PLATE	TO FACE PAGE
FIG. 2. Crescentic plate of thin Bronze with Late-Celtic scroll,	lxxi
FIG. 11. A page from the Book of Durrow, with spiral and interlaced ornamentation,	lxxviii

LIST OF THE PLATES IN PART III.

PLATE	TO FACE PAGE
I. Cross-slab from Skinnet,	32
II. Cross-slab from Ulbster,	34
III. Cross-slab from Golspie,	48
IV. Cross-slab at Farr,	53
V. Fragment of Cross-slab from Lothbeg,	54
VI. Cross-slab from Hilton of Cadboll,	62
VII. Cross-slab at Rosemarkie (No. 1),	64
VIII. Cross-slab at Shandwick,	69
IX. Cross-slab at Nigg,	76
X. Cross-slab at Nigg,	80
XI. Cross-slab at Nigg,	82
XII. Cross-slab from Tarbat (No. 10),	94
XIII. Symbol Stone at Congash (No. 2),	97
XIV. Cross-slab at Glenferness,	116
XV. Symbol Stone from Easterton of Roseisle,	126
XVI. Cross-slab at Brodie,	132
XVII. Cross-slab at Forres,	150
XVIII. Symbol Stone at Inveravon (No. 1),	152
XIX. Symbol Stone at Crichtie,	160

PLATE	TO FACE PAGE
xx. Symbol Stone at Dyce,	164
xxi. Symbol Stone at Mireton,	168
xxii. Symbol Stones at Inverury (No. 4) and Keith Hall,	170
xxiii. Symbol Stone at Kintore (No. 1),	172
xxiv. Symbol Stone at Logie Elphinstone (No. 2),	176
xxv. Symbol Stone at Rhynie (No. 1),	182
xxvi. Cross-slab from Fornaston,	189
xxvii. Cross-slab at Dyce (No. 2),	190
xxviii. The Maiden Stone, Garioch,	191
xxix. Cross-slab at Migvie,	192
xxx. Cross-slab at Aboyne,	194
xxxi. Cross-slab at Fordom,	202
xxxii. Symbol Stone at Aberlemno (No. 1),	205
xxxiii. Symbol Stone at Dunnichen,	207
xxxiv. Cross-slab at Aberlemno (No. 2),	210
xxxv. Cross-slab at Aberlemno (No. 2),	211
xxxvi. Cross-slab at Aberlemno (No. 3),	214
xxxvii. Cross-slab at Cossins,	217
xxxviii. Cross-slab at Eassie,	218
xxxix. Cross-slab at Glamis (No. 1),	221
xl. Cross-slab at Glamis (No. 1),	221
xli. Cross-slab at Glamis (No. 2),	222
xlh. Cross-slab at Glamis (No. 2),	223
xlhii. Cross-slab from Inchbrayock (No. 1),	224
xliv. Cross-slab from Inchbrayock (No. 1),	224
xlv. Cross-slab from Kingoldrum,	226
xlvi. Cross-slab at Kirriemuir (No. 1),	227
xlvii. Cross-slab at Kirriemuir (No. 2),	227
xlviii. Cross-slab from Monifieth,	230
xliv. Cross-slab at St Vigean's (No. 1),	236
l. Upper part of Cross-slab at St Vigean's (No. 1A),	239
li. Cross-slab from Woodway,	243
lii. Cross-slabs at Invergowrie,	256
liii. Lower part of Shaft of Cross from Monifieth (No. 4),	264
liv. Cross-slab at St Vigean's (No. 7),	268
lv. Cross-slab at Dunfallandy,	288
lvi. Cross-slab at Dunfallandy,	288
lvii. Cross-slab at Fowlis Wester,	289
lviii. Cross-slab from Gask,	290
lix. Cross-slab at St Madoes,	295
lx. Cross-slab at Meigle (No. 1),	296

LIST OF PLATES.

XV

PLATE	TO FACE PAGE
LXI. Cross-slab at Meigle (No. 2),	297
LXII. Cross-slab at Meigle (No. 4),	299
LXIII. Cross-slab at Meigle (No. 4),	300
LXIV. Cross-slab at Meigle (No. 5),	301
LXV. Recumbent Monument at Meigle (No. 26),	304
LXVI. Cross-slab at Rossie Priory,	307
LXVII. Sculptured Slab from Dull,	315
LXVIII. Sculptured Arch stone from Forteviot (No. 2),	325
LXIX. Recumbent Hog-backed Monument at Meigle (No. 25),	338
LXX. Inscribed Slab from Greenloaning,	341
LXXI. Cross-slab, with Oghams, from Seconie,	347
LXXII. Portions of an Altar-tomb at St Andrews,	352
LXXIII. Cross-shaft at St Andrews (No. 14),	359
LXXIV. Fragments of Sculptured Slabs at St Andrews,	361
LXXV. Cross at Mugdrum,	367
LXXVI. Mutilated Cross on Eilean Mòr,	381
LXXVII. Cross, known as St Martin's, at Iona,	382
LXXVIII. Cross-shaft at Iona (No. 3),	384
LXXIX. Cross-shaft at Iona (No. 4),	385
LXXX. Ancient Cross and Church at Keills in Knapdale,	390
LXXXI. Cross at Keills in Knapdale, and Cross-slab at Kilfinnan,	391
LXXXII. Cross-shaft at Abercorn (No. 1),	418
LXXXIII. Portion of Cross-shaft from Coldingham,	429
LXXXIV. Slab with Incised Figure from Over Kirkhope, and Inscribed Stone at Yarrow,	432
LXXXV. Sculptured Slab at Jedburgh,	434
LXXXVI. Fragments of Crosses, etc., said to be from Hoddam,	441
LXXXVII. Upper part of Cross at Ruthwell,	443
LXXXVIII. Lower part of Cross at Ruthwell,	444
LXXXIX. Cross at Barochan, and Sculptured Recumbent Slab at Inchinnan (No. 1),	458
xc. Cross-shaft at Inchinnan,	458
xci. Recumbent Monument at Inchinnan,	459
xcii. Cross-shaft from Govan,	459
xciii. Sarcophagus of Sandstone at Govan (No. 1),	462
xciv. Hog-backed Monument at Govan (No. 2),	463
xcv. Hog-backed Monument at Govan (No. 3),	463
xcvi. Cross-shaft at Govan (No. 4), and Cross-shaft at Govan (No. 29),	464
xcvii. Recumbent Cross-slabs at Govan (Nos. 7, 13, 35),	466
xcviii. Recumbent Slabs at Govan (Nos. 8, 14, 15),	468
xcix. Recumbent Cross-slabs at Govan (Nos. 21, 27, 28),	469
c. Cross at Hamilton Palace,	471

PLATE	TO FACE PAGE
ci. Cross-slab from Kilmorie Chapel, Kirkcolm,	482
cii. Cross at Monreith House,	485
ciii. Cross-slab at Whithorn (No. 4),	490
civ. Fragment of Cross-shaft at Whithorn (No. 5),	491
cv. Slab with Interlaced-work at Whithorn (No. 6),	491
cvi. Fragment of Cross-shaft at Whithorn (No. 7),	491
cvii. Inscribed Slabs at Kirkmadrine (Nos. 1, 2),	495
cviii. Inscriptions and Monograms on the Slabs at Kirkmadrine,	495
cix. Stone with Latin Inscription in Whithorn Priory,	497

PART I.

THE EARLY CHRISTIAN MONUMENTS OF SCOTLAND,

BEING (IN SUBSTANCE)

THE RHIND LECTURES FOR 1892.

BY JOSEPH ANDERSON, LL.D.

THE EARLY CHRISTIAN MONUMENTS OF SCOTLAND.

I.—INTRODUCTION.

IT has been proposed by the Society of Antiquaries of Scotland that an attempt should be made to deal scientifically with the group of early monuments known as "The Sculptured Stones of Scotland,"¹ in the hope that some advance may be made towards a systematic knowledge of their peculiar characteristics, their sequence in time, and their relations to other classes of antiquities within or beyond their own special area. Accordingly, the Society has committed to Mr J. Romilly Allen the task of making an Archæological Survey of the monuments under the Gunning Fellowship, and to me the duty of calling attention to its systematised results by means of the Rhind Lectureship.

That the whole of the Sculptured Stones of Scotland are of Christian character and origin is, in the meantime, neither affirmed nor denied. But it becomes evident at the outset of such an investigation that its results will be manifestly incomplete if they do not include an inquiry into the characteristics of the peculiar class of early incised monuments which, while they present no obvious indications of Christianity, do yet exhibit unequivocal evidence that they represent the earlier links in the chain of a system of symbolism which, in its later links, becomes a prominent feature on the monuments that are undeniably Christian in character. Under the general title of *The Early Christian Monuments of Scotland*, we, therefore, propose to investigate all the varieties of sculptured monuments whose types of symbolism, ornamentation or epigraphy are earlier than those usually associated with the European system of ecclesiastical architecture introduced into Scotland towards the commencement of the twelfth century. But before we can be able to deal intelligently with the group of

¹ The title of the greatest work on the subject is *The Sculptured Stones of Scotland*, by John Stuart, LL.D. (Spalding Club), 2 vols. folio, 1856-67; it was preceded by a monograph of *The Ancient Sculptured Monuments of the County of Angus*, by Patrick Chalmers, of Aldbar (Bannatyne Club), imp. folio, 1848.

the Scottish Monuments it is necessary to take a brief review of the whole monumental system of the Early Christianity of the British Isles, of which the Scottish group may be regarded as an offshoot, characterised by strong local or racial variations.

The primitive Christianity of Britain was an extension westwards of the Christianity of the Roman Empire, and so the early Christian monuments of the British Isles form an extension westwards of the monumental system of that Empire, in the period succeeding the reign of Constantine. The common monumental style of this period was an erect stone, generally squared and surface-dressed, and bearing an incised inscription recording the name and age of the deceased along with one or other of the sacred emblems, or pious formulæ, which gave their distinctive character to the monuments of the early Christian Church—a character recognisably distinct from that of the preceding or contemporary Pagan monuments. Within the Empire proper the Latinity of the Christian inscriptions and the forms of the letters were as generally correct as was to be expected of the monumental work of sculptors more or less accustomed to the use and niceties of a literary language. But as the system extended westwards, the language and the forms of the letters became more and more debased as the natural result of their adoption by subjugated populations to whom both language and letters were alien and unfamiliar. The vernacular languages of the subject races had not yet been reduced to writing, and from the superior position of the Latin language as that of the civil and military administrations, and—best reason of all, to those who professed the faith—the language of the Church, it speedily became the general monumental language, to the almost complete exclusion of vernacular languages throughout the Empire. Thus the early Christian monuments of the Rhineland and Gaul are almost wholly Roman in art and idea. In Britain, on the other hand, where the Roman conquest was less complete and the contact with Roman civilisation was of shorter duration, its influence upon the early monuments is much less predominant; and hence it happens that Britain is the only province of the old Roman Empire in which inscriptions on the early Christian monuments appear in the vernacular, as well as in the Latin language.¹

We do not know the story of the first introduction of Christianity into Britain. Whatever may be the historical grounds for assuming its organised existence prior to the departure of the Roman legions in A.D. 410, the few isolated relics of Christian character that have been correlated with the time of the actual occupation of Britain as a Roman province are insufficient to warrant the conclusion that Christianity was very widely spread among the British provincials, and it is almost certain that the

¹ Cf. De Rossi's *Roma Sotterranea Christiana*; Le Blant's *Inscriptions Chrétienues de la Gaule*; Kraus's *Die Christlichen Inschriften der Rheinlande*; Mommsen and Hübner's *Corpus Inscriptionum Latinarum*; Bruce's *Lapidarium Septentrionale*; and Hübner's *Inscriptiones Britannicæ Christianæ*.

great mass of the Celtic population still retained their native Paganism. By the Saxon invasions, which followed on the downfall of the Roman power, the eastern and central regions of Southern Britain were once more dominated by an alien form of Paganism for upwards of two centuries. Hence, if Christianity had taken root among the Celtic tribes driven westwards by the new invaders, it is only in the western and un-Saxonised portions of the country that Christian monuments of this period may be looked for. And it is precisely in these regions of Western and Southern Britain—in Wales and Devon and Cornwall—that we do find a group of Christian monuments of which it can be said that no earlier type exists in Britain.

The characteristics of this group of Christian monuments are that they are erect slabs bearing incised inscriptions in Roman capital letters of more or less debased forms, and that the inscriptions exhibit a certain correspondence in style and substance with the Christian epigraphs in use on the Continent posterior to the reign of Constantine.¹ There is no Christian inscription in Gaul dated earlier than the fourth century,² and it is only in the second half of the fifth century that they begin to appear in any number. After the fourth century the inscription frequently commences with the distinctive formula HIC JACET. At this period the representation of the instrument of the crucifixion had not come into general use as a Christian symbol, and the figure of the cross is consequently absent from the earlier monuments, both of Britain and of Gaul.³ But from the time of Constantine the monogram XPICTOC , composed of the first three letters of the name XPICTOC , became the distinctive symbol of the faith, and was so used on the monuments. In Gaul, where it is often superadded to the inscription, it appears at first as the simple monogram, formed by a conjoined Chi and Rho, but afterwards a horizontal bar placed across the elongated stem of the Rho produced a form P , which was the precursor of the symbol of the cross.⁴ The first form of the monogram (with the diagonal intersections), found in Gaul on monuments dating from A.D. 377 to A.D. 493, does not occur on the monuments in Britain.⁵ But

¹ See the prefaces to Hübner's *Inscriptiones Britannicæ Christianæ* (1876); Le Blant's *Inscriptiones Chrétiennes de la Gaule antérieures au viii. siècle* (1856); and Westwood's *Lapidarium Walliæ*.

² In Rome itself, out of 1400 dated inscriptions on early Christian monuments only thirty-six are anterior to the reign of Constantine.

³ The cross, placed as a symbol on the face, or in the field, of the monument is of exceptionally rare occurrence on the monuments of Gaul, although the use of a small cross at the beginning or end of the inscription is not so uncommon from the middle of the fifth to the end of the seventh century. But the only case of a cross in the field of the monument to which a date can be assigned is attributed to the eighth century. It is figured in Le Blant's plate 92, No. 549, and described, No. 670.

⁴ On the derivation or development of the cross from the monogram, see Romilly Allen's *Early Christian Symbolism*, pp. 87–90.

⁵ It is found on two stones built into church walls in Cornwall (see a paper on the monogram in Cornwall by Arthur G. Langdon in *Archæologia Cambrensis*, fifth series, vol. x. p. 97), and also on objects not sepulchral from different parts of England (Hübner, p. 80, and Haddan and Stubbs, *Ecol. Doc.*, vol. i. p. 39). A late example is on the dedication stone of the church at Jarrow.

the second form (with the horizontal cross-bar), which is found in Gaul on monuments dating from A.D. 400 to A.D. 540, occurs on one monument in Cornwall in association with the formula HIC JACIT¹; and in a more developed and conventionalised form it occurs on inscribed monuments in Scotland in association with the same formula. Thus we obtain a definite starting-point in the correspondence of the earliest Christian monuments of Britain with those of Gaul, attributed to the fifth and sixth centuries of the Christian era—the whole British group of inscribed monuments of this early class being manifestly an extension westwards of the Continental group, but with inevitable local and racial variations.²

The type of monument resulting from the extension westwards into Britain of the monumental system of the early Christianity of the Roman Empire is clearly differentiated from the Gaulish and other Continental types by its own peculiar features. The distinctive features of the British type are that the stone erected is not squared or surface-dressed, that the inscription, which is always in Roman capital letters, is frequently placed on the stone vertically, and when the formula HIC JACIT, or its variants, are not employed, the epigraph is reduced to the last degree of brevity and simplicity. That these monuments, with the simple epigraphic formula, which gives merely the name of the deceased in the genitive and the name of the parent in the genitive, with or without the governing word *filius*, are Christian, and of the earliest types in Britain, is demonstrated by the occurrence of one monument at Southill in Cornwall,³ which has the monogram of the second form superadded to its inscription.⁴

But this British type of early Christian monument, with its simple epigraphic formula expressed in the Latin language and incised in Roman capital letters, does not extend across the Irish Channel.⁵ The Latin language, if it was then known in Ireland, was known only as a scholastic language, introduced for ecclesiastical purposes, and

¹ Among upwards of 1200 inscribed monuments of the Roman heathen time (prior to the reign of Constantine), which have been found in Britain and are described in the seventh volume of Hübner's *Corpus Inscriptionum Latinarum*, there is not one commencing with or containing the formula HIC JACIT. Its absence from pre-Christian monuments, no less than its prevalence on those of Christian time, marks it as distinctively Christian.

² "In each new area which he visits the antiquary sees variations of the formulæ, the symbols, the writing, and the ornamentation of the monuments."—Le Blant's *Manuel d'Épigraphie Chrétienne*, p. 75.

³ See a paper by Mr Arthur G. Langdon in *Archæologia Cambrensis*, fifth series, vol. x. (1893) p. 105.

⁴ The absence of distinctively Christian symbols from a monument is not necessarily an indication of its Pagan character, and still less is the absence of distinctively Christian phrases in the formula of the epigraph. No inscribed monuments of Pagan times, other than those that are distinctively Roman and earlier than the reign of Constantine, are known in Britain.

⁵ The bilingual stone at Killeen Cormac has an inscription in Roman capitals, but it is the only example, and belongs not to the primary but to a secondary type. It is engraved in Petrie's *Christian Inscriptions in the Irish Language*, edited by Miss Stokes, vol. ii. pl. 1.

cultivated by a limited class of persons; whereas in Britain it had long been the common medium of intercourse between the native population and their political administrators. There is in these circumstances a sufficient explanation of the reason why Latin became the monumental language of the early Christianity of Britain,—as it had become the monumental language of the early Christianity of other portions of the Roman Empire inhabited by Teutonic, Gaulish, or Iberian populations,—and a sufficient explanation of the reason why it did not become the monumental language of the early Christianity of Ireland.

The primitive group of the Christian monuments of Ireland exhibits the characteristically brief and simple epigraphic formula of the British monuments, but instead of its being expressed in Latin and incised in Roman capital letters it is expressed in the vernacular Celtic and incised in the Celtic manner, in ogham characters. The group of ogham monuments in Ireland is a very large one,¹ and is consequently of great importance in the monumental history of the British Isles. For there are also in Britain smaller groups of ogham monuments,² in Wales, in Devon, and Cornwall, and in Scotland, which must either be regarded as indigenous to these areas, or as derived from the principal group in Ireland. In Wales, inscriptions in ogham characters are found on twenty-four monuments³; while inscriptions in Latin capitals are found on eighty-four monuments. In Wales, therefore, the Latin form of inscription is the prevailing form and ogham the secondary form. In Ireland, on the other hand, the ogham is the prevailing form; there being only one inscription in Latin capitals to nearly 200 in oghams.

There are two ways in which the ogham inscriptions are associated with the Latin inscriptions. Sometimes the association is one of mere neighbourhood, as where ogham inscribed monuments are found in the same locality with monuments bearing Latin inscriptions in Roman capital letters. But at other times the association is much more intimate, both these varieties of inscriptions being found incised on the same monument. Thus there may occur in the same district three classes of inscribed monuments, viz. (1) with Latin epigraphs in Roman capitals, (2) monuments with Celtic epigraphs in ogham characters, and (3) monuments with duplicate inscriptions setting forth the same epigraph in both forms of lettering and in both languages. This can be readily understood as taking place among a Celtic people brought more or less into contact with the Roman culture for a considerable period; and, accordingly, we find that while this bilingual and biliteral type of monument is relatively most

¹ See Brash's *Ogham Monuments of the Gael* (1879), and Ferguson's *Ogham Inscriptions of Ireland, Wales, and Scotland* (1887). The distribution of the ogham inscriptions known in Ireland up to 1889, amounting to 188, is given by counties in Romilly Allen's *Monumental History of the Early British Church*, p. 68.

² The group in Wales numbers twenty-four, Devon two, Cornwall two, Scotland seventeen.

³ These numbers include both classes of inscriptions, viz., those in oghams alone = 6; and bilinguals = 18.

abundant in Wales, it is relatively least abundant—being known only by a single example—in Ireland.

From the frequent conjunction of the two kinds of epigraphs on the same monuments in Wales, and the association of all the three varieties in the same districts¹ it is evident, not only that the two styles of inscription in ogham characters and Latin capitals had existed side by side, but that both were used by the same individuals. The presumption from this concurrent use of the two forms of inscription is that they were both intelligible to those to whom the monuments were expected to tell their story, because the only reason for placing an inscription on a monument is that its story should be told legibly. Hence the monuments in Ireland where Latin was not generally known were only inscribed in Celtic; and the composite or bilingual inscription was only used in Britain where the population was to a greater extent bilingual.

Ogham inscribed monuments, whether with or without associated inscriptions in the Roman alphabet, are exclusively confined to the British Isles, and in Britain chiefly to those parts with which there are evidences of early Irish intercourse—Wales, the Isle of Man, and Scotland. But the principal group of bilingual inscriptions is in Wales, with outlying examples in Devonshire and Cornwall.² In these bilingual groups the Roman characters are as usual inscribed upon the face of the stone; the Celtic characters are cut along the edge, or on both sides of the angle—a position due to the peculiar construction of the ogham characters,³ which are formed by collocations of different numbers of short lines impinging upon or crossing a stem-line. The stem-line may be a line incised on the stone, or it may be, as it usually is in the Welsh, and South British, and Irish oghams, merely the line of the aris, or angle of the stone itself—or it may be partly both.⁴ From its peculiar construction the ogham inscrip-

¹ Thus in Carnarthenshire, there are fourteen monuments inscribed in Latin capitals, one in oghams alone, and four bilingual; and in Pembrokeshire there are seven monuments inscribed in Latin capitals, four in oghams alone, and eight bilingual. See a table of the distribution of the several varieties of inscribed monuments in Romilly Allen's *Monumental History of the Early British Church* (1889), p. 68.

² The Isle of Man has six ogham inscriptions and one in debased Roman capitals, but no bilinguals; Devon has two bilinguals and Cornwall two, but no examples of the ogham alone. An ogham inscription recently found in the Romano-British town of Silchester, Hants, is described in *Archæologia*, vol. liv. p. 233.

³ This form of writing is not alphabetical in the ordinary sense, though as a matter of necessity and convenience we speak of the ogham alphabet and ogham letters to indicate the various collocations of digits with relation to their stem-line, which in that manner of writing stand for corresponding letters of the Roman alphabet or rather for the sounds indicated by them. The ogham alphabet consists of twenty letters disposed as follows:—

B L F S N H T D C Q M G N G S T R A O U E I

In the most of the Irish, and Welsh, and South British inscriptions, however, the vowel digits are mere notches; the Scottish group differs from these in having the vowels drawn at right angles across the stem-line, as here shown. The key to the ogham alphabet is given, with some extra signs, in the Book of Ballymote, but it has also been independently determined from the monuments themselves.

⁴ As in the Newton Stone, described on p. xxiii., and in Part III. p. 197.

tion is generally and naturally placed on the stone vertically, reading usually from the bottom upwards. It is also a peculiarity of all the Latin inscriptions of the bilingual groups in Wales and South Britain that though these are inscribed in Roman capital letters they are not placed in the Roman manner, to be read from left to right, but in the Celtic manner, to be read vertically, sometimes from the top downwards and sometimes from the bottom upwards. This departure from the ordinary position of the Latin inscription is not confined to monuments that are bilingual. It is in fact the prevailing custom among British monuments bearing inscriptions in Roman capitals, whether accompanied by ogham inscriptions or not.¹ The obvious suggestion is that those Latin inscriptions which are placed vertically, along with an ogham inscription on the same stone, are so placed because the ogham is naturally read vertically, and that the influence of the custom of the ogham verticality resulted in the Roman manner giving way to the Celtic, and thus produced in Britain a class of early Christian inscriptions in the Roman alphabet reading vertically.² The period of the introduction of the ogham into the series of lapidary inscriptions of Britain has not been ascertained, but as there is no doubt that the principal area of ogham monuments is in Ireland, and as the form of cross which is principally associated with them is usually the early equal-armed form, they must be referred to the primitive period of Christianity rather than to the later period of the organised Celtic Church. The bilingual inscription is such an exceedingly rare form in Ireland that there can be no hesitation in ascribing it, as an exceptional form, to a period later than the general form. This conclusion is rendered unavoidable by the consideration that the general form, the ogham, creates the exceptional bilingual by becoming associated on the same monument with the inscription in Roman capitals—a form which does not exist in Ireland separately and only very rarely even in this combination. If inscriptions in Roman capitals had been of frequent occurrence in Ireland a question of priority might have been raised as between them and the ogham inscriptions; but as there are in Ireland no inscriptions in Roman capitals alone, and only one in which the Roman capitals occur associated with oghams on the same stone, there can be only one conclusion—that the ogham inscription is the primary form of epigraph in Ireland, and the exceptional bilingual is a secondary form.³

Again, when we consider that the principal area of the inscriptions in Roman

¹ There are twenty-five inscriptions in Devon and Cornwall that read vertically, and in Wales there are sixty-two. A few of the older inscriptions in capitals read horizontally, from left to right, but the bulk of those which read in this way are in minuscule letters and of later date.

² Hübner also notices the occurrence of several rude monuments with vertical inscriptions—"apud Celtas Italiae," but gives no further reference. *Inscrip. Brit. Christ.*, preface, p. 11.

³ To these there is of course to be added the third form (so numerous in Ireland) of inscriptions in minuscules, which are usually in the Irish language, and present formulas distinctively Irish. See Petrie's *Christian Inscriptions in Ireland*.

capitals is in Wales,¹ and that in Wales also is the principal area of the bilinguals, while in the same region there are also a considerable number of inscriptions of the Irish type, *i.e.*, in oghams pure and simple—the conclusion is unavoidable that the Welsh group is the only one which presents representative sets of the two simple varieties, as well as of the combined variety of inscription. Hence Wales is the only area of which we can say with certainty that the conditions necessary for the evolution of the composite bilingual were present within it; while it is at the same time the area which has produced bilinguals in greatest abundance.

Ireland being the principal area of the ogham pure and simple,² it is clear that the origin of that variety of inscription cannot be ascribed to Wales, although it is found there to be contemporary to a considerable extent with the inscriptions in Roman capitals. It appears probable therefore that the ogham system of inscriptions was developed in Ireland during the time when the system of inscriptions in Roman capitals prevailed in Western and Southern Britain,³ and that it was imported from Ireland into Wales, and ultimately combined with the system of inscriptions in Roman capitals already prevailing there, so as to form the bilingual. The latter then became the prevalent mode of using the ogham in Wales, although the ogham pure and simple remained the prevalent mode in Ireland.

The precise period of the commencement of the ogham system of inscriptions is not known,⁴ but the absence of the monogram from the early Christian monumental symbolism of Ireland is rather against the idea of a date so early as the fifth century being assigned to it, and the fact that the crosses which are associated with the ogham inscriptions are in many cases of the form which was developed from the encircled monogram is in favour of a date probably not very much later.

Summing up the results of the argument, the order of development would seem to have been that, while the extension westwards of the style of early Christian monument prevalent on the Continent subsequent to the reign of Constantine produced a

¹ There are altogether about ninety monuments of the early Christian period in Wales bearing inscriptions, and of these sixty-six or thereby are in Roman capitals, eighteen in bilinguals, and six in oghams alone.

² The number of ogham inscriptions in Ireland is about 190, and only two are bilingual, one being in oghams and Roman capitals and the other in oghams and minuseules.

³ This has been previously pointed out by Mr Romilly Allen in his *Monumental History of the Early British Church*.

⁴ Sir Samuel Ferguson considered that there were reasonable grounds for believing that the bulk if not all of our ogham monuments are Christian—Ferguson's *Ogham Inscriptions of Ireland, Wales, and Scotland* (1887), p. 18. Dr Graves, Bishop of Limerick, also expresses his belief that these monuments, rude as they may be, and bearing no Christian emblem, belong to the Christian period—*Proc. Roy. Irish Acad.*, 3rd series, vol. iii. p. 379. If the bilingual monument at Llanfaltey, Carmarthenshire, can be assumed to be that of Vortipore, Prince of the Demetae, mentioned by Gildas, the period of the bilinguals would be extended, in Wales at least, as early as the second half of the sixth century—*Arch. Camb.* (fifth series), vol. xii. p. 307.

British type inscribed with Latin epigraphs in Roman capitals,¹ the extension did not pass over into Ireland, either in the British or in the Continental form; but the introduction of Christianity produced in Ireland an Irish type of monument, with the British type of formula expressed in the vernacular language, and inscribed in Celtic or Ogham characters. Subsequently the close intercourse between the early Irish and Welsh Churches brought the Irish type to Wales, and there the commingling of the types produced a third type with a bilingual epigraph. This third type did not extend to any great extent beyond the Welsh area, but outliers from its principal group are found in Devon and Cornwall, in Ireland and in Scotland.

But although the introduction of Christianity produced in the Romanised region of Southern Scotland a variety of the proto-British type of monument inscribed in Roman capitals, this type did not extend into the un-Romanised portion of the country beyond the Wall of Antoninus and the Firths of Forth and Clyde. The monuments of this un-Romanised region are characterised partly by a system of symbolism peculiar to themselves, and partly by a system of ornamentation common to the ecclesiastical manuscripts and metal-work of the Celtic Church, and to those groups of monuments in England, Wales, and Ireland, which are not of the proto-British type, but of a secondary type characterised by the presence of minuscule inscriptions, when they are inscribed.

The general group of the Scottish monuments consists of upwards of 500 examples scattered over the whole area of the Mainland and outlying Isles. These are doubtless but a meagre residue of the whole number originally existing. But 500 monuments of this early character is a very large number, and, considering its obvious suggestion that the period over which they prevailed must necessarily have been of extended duration, we must be prepared to find that changes had taken place, both in the form and fashion of the monuments themselves, in the prevalence and the expression of the symbolism they exhibit, and in the style and execution of their sculptured decoration, for this has been true of all the products of man's taste and handicraft in all ages. Hence there arises the preliminary necessity of classifying them so as to ascertain the typical characteristics which they have successively exhibited, and thus to determine their probable sequence in time. And they lend themselves readily to this method of treatment, for when they are examined in detail they are found to be divisible by their most pronounced characteristics into the following three classes:—

Class I. Monuments with incised symbols only.

Class II. Monuments with symbols and Celtic ornament carved in relief.

Class III. Monuments with Celtic ornament in relief, but without the symbols of the other two classes.

¹ The brevity and constancy of form of the epigraph and its almost invariably patronymic character are striking features of the British type. The Continental epigraphs abound in variations and in such amplifications of the formula as *IN PACE, BONÆ MEMORIÆ*, with specifica-

Comparing these classified groups with each other, it is apparent that, since the first two have the symbols, and the last two have Celtic ornament, while the intermediate group is the only one that has both symbols and ornament, Class II. must be regarded as the transitional stage between the first and third classes. The order in which they have been enumerated is, therefore, presumably the order of their sequence in time, and this conclusion is borne out by the relative numbers of each class. In the whole of Scotland there are 124 monuments of Class I.; of Class II. there are only 68; but of Class III. there are 307. Class II. could not have been the earliest, because it is clearly a transition type. It is conceivable, however, that the transition might have been the reverse way of the enumeration, or from Class III. to Class I.; but on this supposition we should have to account for the fact that the examples of what would thus be the oldest class are twice as numerous as those of what would thus be the latest. Even this might be conceivable in certain circumstances; but taking into account such collateral indications as that the monuments of Class I. are merely rough, unshaped stones in their natural form, with designs incised upon their natural surfaces; that those of Class II. are shaped to regular forms, surface-dressed, and sculptured in relief; and that those of Class III. include the greatest variety of form, the highest relief, and the whole of the free-standing crosses—there can be no hesitation in concluding that the classification must stand in the order in which the classes have been enumerated. This classification, however, takes no account of inscriptional characteristics, because inscriptions are of exceptional occurrence on the Scottish monuments, and therefore fail to afford a means of general classification.

II.—THE INSCRIBED MONUMENTS.

The Scottish monuments differ from those of Ireland and Wales in this respect that they are much more rarely inscribed. Some of those which bear inscriptions also bear symbols or sculptured ornamentation by which they may be classified irrespective of their inscriptions but there is some advantage in dealing in the first place with the inscribed monuments taken by themselves, because they may be arranged by their palæographical characteristics, so as to separate the earlier from the later groups, and thus to establish a sequence, which, when subsequently considered in relation to the associated symbols and ornamentation, may help to determine the sequence of the monuments that bear no inscriptions.

tions of the age of the deceased, the date of the death, and the names of those who erected the monument to their memory. The British formula, specifying the deceased as “son or daughter of—,” is almost unknown on the Continent.

The inscribed monuments of Scotland may be divided by the characteristics of their inscriptions into the following classes, viz., those that bear:—

1. Inscriptions in Roman capital letters—Latin.
2. Inscriptions in Oghams—Celtic.
3. Inscriptions (bilingual) in Oghams and Roman letters—Celtic and Latin.
4. Inscriptions in minuscular letters—Latin or Celtic.
5. Inscriptions in Hiberno-Saxon capital letters—Latin or Celtic.
6. Inscriptions in Runes—Anglo-Saxon or Scandinavian.

The geographical distribution of these classes of inscribed monuments may be roughly indicated as follows:—

Inscriptions in Roman capitals and the Latin language are confined to the Romanised area south of the Wall of Antoninus.¹

Inscriptions in oghams, including bilinguals, to the north-eastern mainland and Northern Isles, from Fife to Shetland.

Inscriptions in minuscular letters and Hiberno-Saxon capitals, to the East Central and Northern divisions of the mainland.

Inscriptions in Runes to the Northern and Western coasts from Shetland to the Solway Firth.

I.—INSCRIPTIONS IN ROMAN CAPITALS.

The group of monuments which is peculiar to the Romanised area of Scotland is characterised by inscriptions in Roman capitals, sometimes mixed with minuscules. They are all in the territory over which the influence of the mission of St Ninian extended, and it is in the immediate vicinity of St Ninian's Church at Whithorn that the earliest and most interesting cluster of such inscriptions is yet extant.

One at Whithorn, slightly debased in language and lettering, presents several characteristics worthy of notice.² It reads—

TE DOMINVM LAVDAMVS LATINVS ANNORVM XXXV ET FILIA SVA
ANNI V [H]IC SI[G]NVM FECERVNT NEPV[S] BARROVADI

Which may be translated—We praise thee Lord. Latinus of thirty-five years and his daughter of five years [rest] here. The grandsons of Barrovad made [their] monument.

The monument thus commemorates two persons, a father and daughter, and the ages of both are specified, though only the father is named. This mention of the age of the deceased, which was a general custom in Roman epitaphs of the heathen time, was also a common feature of the Christian epigraphs of Italy and Gaul, although it is by no means common in Britain.³ The mention of those by whom the monument was

¹ With perhaps the exception of the doubtful Greenloaing inscription.

² See the illustration at p. 497, fig. 539, in Part III. The individual letters of the word DOMINVM are scarcely visible, but the space is too great for DEVM.

³ There is one instance at Hayle, in Cornwall (Hübner, No. 7), and another at Lanerfyl, in Wales (Hübner, No. 125).

erected, which was also a common custom in Roman epitaphs of pre-Christian time, both in Britain and on the Continent, is not uncommon in very early Christian epigraphs, but disappears from the monuments of Gaul soon after the commencement of the fifth century.¹

The designation as NEPVS BARROVADI, however, and the formula SIGNVM FECERVNT are both peculiar. Still more peculiar is the opening acclamation of the inscription TE DOMINVM LAVDAMVS.² Among upwards of 700 inscribed monuments of the first eight centuries in the work of Le Blant, collected from all parts of Gaul, it does not once occur. It does not again occur on any of the early Christian monuments of Britain.

On the opposite side of Luce Bay from Whithorn, in the old and disused graveyard of Kirkmadrine,³ there was a group of three monuments of this early type, with inscriptions in Roman capital letters associated with the monogram. One of these has disappeared, but two remain, which owe their preservation to their having been utilised as gateposts to the enclosure of the burying-ground. They are thin slabs of indurated schist, undressed and bearing their inscriptions near the top of the flatter face of the stone in horizontal lines. They differ from each other slightly in several particulars, which it may be desirable to notice. No. 1, which is the largest stone, has the longest inscription.⁴ It reads—

A ET Ω HIC IACENT SANCTI ET PRAECIPVI SACERDOTES
ID ES[T] VIVENTIVS ET MAVORIVS

¹ Professor Rhys, in the *Academy* of 5th September 1891, No. 1009, p. 201, says that he sees nothing against this monument being of fifth or sixth century.

² The phrase TE DOMINVM LAVDAMVS does not occur in the Vulgate. It is apparently a paraphrastic rendering of the opening words of the hymn known as the "Te Deum"—
Te Deum laudamus

Te Dominum confitemur.

I am indebted to Bishop Dowden for a reference to an article in Julian's *Dictionary of Hymnology*, by the present Bishop of Salisbury, in which the date of the Te Deum (as we now know it) is assigned to between A.D. 400 and A.D. 450. A more recent writer (Dom G. Morin, *Revue Benedictine*, Février 1894) ascribes its authorship to Nicetas, Bishop of Remesiana in Dacia, c. A.D. 392-414. Notices of it occur in the rules of Aurelian and his predecessor Cæsarius of Arles (A.D. 470-542). It possesses much in common with the Gallican Liturgy, from which many of its phrases are apparently derived. It occurs in the *Antiphonary of Bangor* (A.D. 680-691), under the title "Hymnus in Die Dominica," which shows that it was in use in the Celtic Church of the seventh century. See a comparison of three early Irish versions of it in *The Antiphonary of Bangor* (Henry Bradshaw Society), edited by F. E. Warren, B.D., 1895, vol. ii. appendix, p. 93.

³ Dr Stuart suggests that the Church of Kirkmadrine, a suppressed parish now united to Stoneykirk, may have been dedicated to St Mathurinus, a contemporary of St Martin. The feast of St Mathurin was kept on the 9th November, and the local fair at Kirkmadrine was formerly held on 22nd November.

⁴ See the illustration at p. 495, fig. 534, in Part III. Hübner and others accept the reading of ID EST, but Bishop Dowden suggests that instead of supplying the T we should read IDES as the first of three names.

The epigraph commences with the well-known formula Λ ET Ω .¹ Under this is the monogram with the horizontal intersections, enclosed within a circle. The monogram is of the special variety made with the Roman letter R, and not with the Greek P, as is usually the case in its earlier forms. The commemorative inscription comes below the monogram, disposed in six lines, without division into words.

The letters are well formed but occasionally ligatured, and the only feature calling for special remark is the expression SANCTI ET PRAECIPUI SACERDOTES, which has been taken to imply that the persons commemorated were Bishops.² In Gaul the term SACERDOS is found on monuments as applied to Bishops, and it might be argued that the use of the adjectives SANCTI ET PRAECIPUI was intended to imply a higher ecclesiastical order than that of the simple priest; but the fact that SACERDOS is occasionally found on the monuments of Gaul applied to priests as well as to bishops deprives the argument of its decisiveness. That the monument commemorates persons so eminently distinguished as to be classed together by the terms SANCTI ET PRAECIPUI is a most unusual circumstance, and rather suggestive of a commemoration made sometime after their decease, than of a record made at the time of simultaneous deaths.

The second monument also bore the names of two persons.³ It is a slab, somewhat longer and slightly narrower than the other, but very much thinner and less regular in the edges. There is no trace of anything answering to the Λ ET Ω over the monogram, but as the top of the stone is irregularly fractured, its original upper part may have been broken away. The monogram within a circle, though smaller than that on the first monument, is precisely similar to it in every detail. Immediately under it is the commemorative inscription. Unfortunately a part of the stone on the left side has flaked off and only the concluding letter of the first name is left. There is not room in the fracture for more than four or five letters, and such a name as IVSTVS would completely fill the space, so that the inscription might read [IVSTV]S ET FLOREN-

¹ The Alpha and Omega occur associated with the monogram on the early Christian monuments of Italy and Gaul from the middle of the fourth to the middle of the sixth century. There are examples at Ravenna much later, as on the sarcophagus of Archbishop Felix, A.D. 705. The same association is found in ecclesiastical sculptures, and mosaics, as in those of St Vitalis at Ravenna. After the disuse of the monogram they continue to be associated with the cross, both in monumental and ecclesiastical sculptures.

² Professor Stephens, with reference to the occurrence of this term on the cross-shaft at Yarm, Yorkshire, says:—"It is well known that in the early church the epithet SACERDOS had a very distinctive meaning. It signified *Bishop*, as SACERDOTIUM was used for *Episcopate*; while, on the other hand, the word for priest was PRESBYTER."—*Old Northern Runic Monuments*, vol. iii. p. 191. Du Cange states that in the primitive church *sacerdos* was usually applied to Bishops, while *sacerdos secundi ordinis* was equivalent to *Presbyter*. Among the Gaulish monuments given by Le Blant *Presbyter* is generally used for Priest, and *sacerdos* generally, though not always, for Bishop. On the monuments of Wales we have GURDON SACERDOS at Llanthetty, Brecknockshire, and SENACVS PRESBYTER and VERACIVS PRESBYTER in Carnarvonshire.—Hübner, *Chr. Ins. Brit.*, Nos. 42, 144, 145. In the Leonine Sacramentary the Bishop of Rome is styled PRAECIPIUS SACERDOS.

³ See the illustration at p. 495, fig. 535, in Part III.

TIVS. As the first monument has the monogram repeated on the back where there is no inscription—thus probably inscribing the *signum crucis* once for each person commemorated—it is probable that the second monument was similarly inscribed on the reverse also, for the stone has apparently split along its entire length, and is now less than half the thickness of the other slab.

The third stone has disappeared, but is represented in a drawing made apparently about 1820.¹ It bore only the monogram and underneath it the words INITIVM ET FINIS—equivalent to the A ET Ω of the first monument.² As this stone exhibits no commemorative inscription the question is suggested whether it may not have been merely the reverse side split off from the monument No. 2, which would in that case answer completely to the type of No. 1.

The lettering of the second monument is of the same style as that of the first, and cannot be of much later date, although the tendency to bring the vertical strokes of the letters below the line, and the angular forms of the F, L and T, indicate a certain degree of decadence. The form of the monogram³ on both monuments is, however, a certain indication that they do not belong to the earliest class of monuments characterised by this sign. In Gaul, towards the close of the fifth century, the monogram frequently appears surrounded by a wreath of palm-branches, the emblem of victory. It thus became a symbolic representation of the motto with which it was originally associated, IN HOC SIGNO VINCES. In incised sculpture the wreath was conventionally indicated by a simple circle, and the symbolic import of the monogram thus encircled, when conjoined with the A ET Ω, as we see it on the Kirkmadrine monuments, is explained in the following lines, placed under such a monogram on a monument at Milan⁴:—

CIRCVLVS HIC SVMMI COMPRENDIT NOMINA REGIS
QVEM SINE PRINCIPIO ET SINE FINE VIDES
PRINCIPIVM CVM FINE SIMVL TIBI DENOTAT A ET Ω
X ET P CHRISTI NOMINA SANCTA TENENT

¹ *Proceedings Soc. Ant. Scot.*, vol. ix. p. 568.

² These words INITIVM ET FINIS occur underneath the A ET Ω of large size which appear on either side of the head of the Saviour in a miniature of the crucifixion in the Durham Gospels of the early part of the eighth century (Westwood's *Miniatures*, p. 49). The last verse of the Hymn *Sancti Venite*, preserved in the *Antiphonarium Benchoyense*, runs:—

“Alpha et Omega
Ipsē Christus Dominus
Venit venturus
Judicare homines.”

³ Mr Romilly Allen has pointed out that the monograms on the Kirkmadrine monuments bear a close resemblance to those sculptured over the doorways of houses in Syria, of the sixth century, which have been illustrated in M. de Vogué's *Syrie Centrale*.—Allen's *Early Christian Symbolism*, p. 94.

⁴ Allegranza, *Monum. Antichi di Milano*, p. 19, cited in Le Blant's *Inscriptions Chrétiennes de la Gaule*, vol. i. p. 105.

Another inscribed stone of somewhat similar character to these stood, till lately, near the farm of Enoch and on the side of the road leading from Whithorn toward the Isle of Whithorn. It is a slab about five feet high,¹ having on one face the inscription:—LOC[VS] S[ANC]TI PETRI APVSTOLI. Above the inscription, as in the case of the monuments at Kirkmadrine, is the monogram with the Roman form of the R. Here, however, it assumes the advanced form of a segmented cross within a circle, to which is added a shaft so defined by curved lines as to give it an expanded base. Thus there is developed from the monogram a long-shafted cross with a circular head.² The letters of the inscription also present some peculiarities which indicate that they are of later date than the more simple and regular lettering of the Kirkmadrine inscriptions. The long, straight-bodied S of the contracted word S[ANC]TI is almost a minuscule. The lettering generally is lank, the ends of the cross-bars, as well as the apices of the vertical bars, are feathered or rusticated, and the O is of smaller size than the rest of the letters. Such characteristics are found in the early Christian inscriptions of Gaul from about the commencement of the sixth century to the end of the seventh. There is no similar monument elsewhere in Britain,³ but from the terms of the inscription it may be concluded that it is a termon cross marking the boundary of church lands or sanctuary girth.⁴

In the parish of Kirkliston, about six miles from Edinburgh and close to the junction of the Gogar water with the Almond, there is a large unhewn boulder of greenstone set on end,⁵ and bearing on one of its broad faces the following inscription in debased Roman capitals:—IN [H]OC TVMVLO IACIT VETTA F[ILIVS] VICTI. There is no division between the words; the letters, however, are fairly regular in form, the L being angular and the MV ligatured. The use of OC for HOC, is paralleled by the use of IC for HIC on the Whithorn monument and in the formula, IC IACIT, which occurs no fewer than nine times on the early Christian monuments of Wales and Cornwall.⁶ The formula IN HOC TVMVLO occurs only

¹ See the illustration on p. 496 in Part III.

² This long-shafted cross with a circular head subsequently becomes the characteristic form of cross in Wigtonshire.

³ Fordun records that in the year 1260 a cross was dug up at Peebles which bore the following inscription, LOCUS SANCTI NICHOLAI EPISCOPI, but nothing further is known of the monument.

⁴ At Kilnasaggart, County Armagh, in Ireland, there is an unhewn pillar-stone incised with crosses enclosed in circles, and bearing an inscription, not in Latin but in the vernacular, and not in Roman capitals but in minuscules, to record that "Ternoc, son of Ciaran, the Little, bequeathed that place under the protection of Peter, the Apostle." The Annals of Tighernach record the death of Ternoc MacCiaran in A.D. 716.

⁵ See the illustration on p. 426 in Part III. This monument, which is locally known as The Cat-stane, has acquired some celebrity from its tentative identification by Sir James Y. Simpson as the tombstone of the grandfather of Hengist and Iorsa. See the *Proceedings of the Soc. Ant. Scot.*, vol. iv. pp. 119–165; Stephens's *Runic Monuments*, vol. i. p. 59.

⁶ See Hübner's Index of formulæ to the *Inscript. Brit. Christ.*

once in Wales,¹ but its variants of HIC IN TVMVLO IACIT,—HIC TVMVLO IACIT,—HIC IACET IN TVMVLO,—and HIC IACIT IN HOC CONGERIES LAPIDVM are also found in Wales and Cornwall. On the monuments of Gaul, where it is of frequent occurrence, it is an indication of later date than the epigraphs in simpler terms, as it only begins to appear towards the close of the fifth, and continues till after the seventh century. On the monument of Bishop Gregory at Ilipa, in Spain (A.D. 544), which bears the monogram within a circle and the A ET Ω, the inscription commences with the formula, IN HOC TVMVLO,² so that we have in the middle of the sixth century the three most prominent features of these early monuments in combination. The monogram is absent from the Kirkliston monument, but its Christian character cannot remain in doubt, since excavation has revealed the fact that it stands in the midst of a cemetery of early Christian graves lined with flat stones, and the bodies laid at full length with the customary Christian orientation.³

At Whitthope, about half a mile from Yarrow Kirk in Selkirkshire, some time in the early years of the present century, a rough unhewn slab of greywacke,⁴ about 5 feet in length and 3 feet in greatest breadth, was found lying under the surface when the ground was first broken up for cultivation. It shows on one face a much wasted inscription in six lines, of which only part is legible;⁵ HIC MEMOR IACET I[N TVMV]LO PRINCIPE[S] NVDI DVMNOGENI HIC IACENT IN TVMVLO DVO FILI LIBERALI. The lettering is very irregular. Its peculiarities are the use of the square C and the almost horizontal direction given to the tail of the R, which is also twice ligatured with an I. The square C appears on the monumental inscriptions of Gaul in the beginning of the sixth century and disappears after the close of the seventh century. The special form of the R with the tail extending horizontally does not occur in Gaul, but is found on the monuments of Wales and Cornwall.⁶

¹ At Abercar, Brecknockshire (Hübner's No. 52).

² Hübner's *Inscriptiones Hispaniæ Christianæ*, No. 60.

³ See the account of the excavation of this cemetery by Mr Hutchison in the *Proc. Soc. Ant. Scot.*, vol. vi. p. 184; and *Scotland in Early Christian Times* (2nd series), p. 249. Stone-lined graves, or, as they are sometimes described, "long cists made of flattish stones for the sides and covers," are common characteristics of early Christian cemeteries in Scotland and Ireland. In the graveyard of St Blane's, Bute, the older graves are cists formed of long slate or other flags set on edge and covered with a long slab. A cist burial took place here in 1892. —Hewison's *Bute in the Olden Times*, vol. i. p. 214.

⁴ See the illustration at p. 432 in Part III.

⁵ There are various readings. Professor Rhys prefers HIC MEMORIA CETILOI, which Miss Russell has proposed in the *Transactions of the Berwickshire Club*, 1882. Dr J. A. Smith reads PRINCIPES CNVDI DVMNOGENI.—*Proceedings of Soc. Ant. Scot.*, vol. iv. p. 538.

⁶ As at St Clements near Truro (Hübner, 9), St Cubert (H. 12) and Worthyvale (H. 17) in Cornwall, and Clydai (H. 110) in Pembrokeshire.

From Overkirkhope in Ettrick, where there are traces of an ancient ecclesiastical site, there is a sculptured stone now in the National Museum.¹ It is a narrow oblong naturally-shaped slab of close-grained schist, 4 feet in length, 13 inches in greatest breadth, and about $4\frac{1}{2}$ inches in thickness, and bears on the upper part of its flatter face the rudely incised figure of a man with extended arms and the hands upraised as in the ancient attitude of prayer.² The head is large in proportion to the rest of the figure, and the dress consists of a tunic reaching almost to the ankles. The feet apparently are bare. A small equal-armed cross is deeply incised on the breast, and close to the body at either side are two small circles with central dots.³ Above the head on the left side of the figure is a small chiselled label, with the letters **P P** in the centre. Below this is another small equal-armed cross. The lines of the human figure are picked out with a pointed tool, those of the label and the letters appear as if cut or cleared out by a driven tool. The attitude of the figure recalls the outspread arms and uplifted hands of the Oranti, in the catacombs, but the rudeness of the representation is only paralleled by the Burgundian belt-clasps of sixth or seventh centuries⁴ on which (as in the catacombs) the figure of the Prophet Daniel is represented in a similar posture of prayer.

II.—INSCRIPTIONS IN OGHAMS.

As the general series of inscriptions in Roman letters is divided into (1) an earlier group distinguished by the use of capitals without separation into words, and (2) a later group distinguished by the use of minuscules, frequently divided into words; so the ogham series of inscriptions is also divided into two groups—one earlier and the other later, distinguished from each other by certain characteristic features of lettering, which seem to be persistent. The earlier variety, which is the prevailing type of inscription on the monuments of Ireland, Wales, and South Britain, is

¹ See the illustration at p. 432 in Part III.

² Figures standing with outstretched arms and uplifted hands are found on the monuments at Gnoll Castle and Llanfrynach, and twice on one slab at Llanhamlech in Wales; also on the later form of coped tombstones at Inchcolm in the Firth of Forth, and at Lower Heysham in Lancashire. Tertullian and others of the early Christian fathers explained the reason of the adoption of this attitude as having reference to the position of Christ on the Cross. "When Daniel spread out his arms in the Den and thus conformed to the assimilitude of the cross, God shut the mouths of the Lions." It also became a symbol of the Resurrection, as Augustine says:—*Stantes oramus quod est signum resurrectionis*. The practice of prayer in this attitude existed in the Irish church. Dr Whitley Stokes cites references to it as *crois fhigill* in MSS. of ninth to fourteenth centuries. In the *Vision of Adamnan* it is stated that when Moses "lifted his hands to God in cross-vigil" defeat was inflicted on the heathen.

³ A small equal-armed cross is placed over the head of the praying figure on the stone at Llanfrynach, and in the case of one of the two figures on the stone at Llanhamlech, there are two small discs or double circles, one over each shoulder.

⁴ For descriptions and figures of these belt-clasps, see Le Blant, vol. i. p. 492, and Troyon in *Mittheilungen der Antiq. Gesellschaft in Zurich*, vol. ii. pls. 2 and 3.

characterised by the absence of an incised stem-line—the corner or arris of the stone itself being used as a line for the collocation of the digits—and by the use of short notches instead of digits of the ordinary length, for the vowels. The later variety, which is the prevailing type of inscription on the monuments of Scotland and in Irish manuscripts, is characterised by the use of a stem-line, incised on the face of the monument, and by the use of lines of the same length as those of the consonantal digits cutting the stem-line at right angles, for the vowels. It is also characterised by the use of several arbitrary and compound characters for certain diphthongs and vowel sounds, and occasionally by the separation of the words by points. That these two varieties of ogham inscriptions are rightly distinguished as earlier and later, is shown by the fact that the first variety alone is used in the bilingual inscriptions, along with the early style of Roman lettering; while the second alone is used in manuscripts, and in the case of the one Irish biliteral inscribed in minuscules.

Applying this classification to the ogham inscribed monuments of Scotland, we find that there is only one of them—at Auquhollie in Kineardineshire¹—that can be placed in the earlier group; that the Newton Stone,² so far as can be judged by its ogham, falls into the later group rather than into the earlier, although as its digits are partly written on the arris and partly on an incised stem-line, it may be regarded as exemplifying the transition from the earlier variety to the later; and that all the other Scottish oghams belong to the later group.

The Auquhollie and Newton Stones also stand apart from the other ogham inscribed monuments in Scotland, in respect of their monumental characteristics. They are both unshaped and undressed boulder stones, with nothing but the inscriptions incised upon them. All the others bear symbolic or pictorial subjects along with the inscription, and most of them are shaped and surface-dressed, and elaborately carved in relief. The order into which they fall by their monumental characteristics agrees with the order of their classification by their inscriptional characteristics, in so far as the Auquhollie Stone comes first and the Bressay Stone last; while the others occupy an intermediate position between the earliest and latest.

The inscription on the Logie Stone³ is of the kind called a wheel ogham,⁴ being written on a stem-line bent round in the form of a circle and the two ends joined, so that the legend has no apparent beginning or end. The Scoonie Stone⁵ bears a cross ornamented with interlaced work on one side, and on the other a hunting-scene, which is so placed that the nose and the fore-leg of the stag cross and interrupt the stem-line

¹ See the illustration on p. 203 in Part III.

² See the illustration on p. 197 in Part III.

³ See the illustration on p. 176 in Part III.

⁴ The wheel ogham is mentioned in the *Amra Coluimcille*, a hymn in praise of St Columba, attributed to the Bard, Dallan Forgaill, in which, among other accomplishments of the Saint, is enumerated the ability to read this species of cryptic writing.

⁵ See the illustration at p. 347 in Part III.

of the ogham inscription. It is thus plain that the inscription was added after the hunting-scene was carved; for if the inscription had been first carved, its stem-line would have been continuous; the lines of the stag's fore-leg would simply have intersected it, while the space between them, representing the thickness of the leg, would also have been intersected by it, and would not have interrupted it. That the Aboyne inscription¹ was also incised after the monument was sculptured is shown by the fact that it is incised partly along the moulding, or raised and rounded edging, of a large panel, of which one side is broken away, and partly on the blank space between the moulding and the margin of an elaborate design in interlaced work, which seems to have filled the interior of the panel. The Brodie Stone,² which is a shaped slab of freestone over 6 feet in length and 3 feet in width, has on the obverse a Celtic cross ornamented with interlaced work, and on the reverse, groups of figure-subjects and symbols. The inscriptions are incised along the two mouldings or slightly raised and rounded edgings which border or enclose the field of the reverse, and on one of the similar edgings of the obverse. It is thus evident that the inscription was added after the completion of the moulding, which serves as a framework to enclose and give unity to the decoration of the monument. On the Golspie Stone³ the inscription is incised along the rounded edging of one side and the top of the sculptured face of the monument. In this case the presumption is that the digits of the inscription were incised after the slightly rounded edging had been completed and defined by the incised lines separating it on the one hand from the field of the face of the stone, which is crowded with figures and symbols, and on the other from that of the adjoining side-face or edge of the stone which is sculptured with a running pattern of escaping and re-entering spirals. The digits impinge upon the line on the face of the stone in some cases and come a little short of it in others; but it is evident that this line itself was put in subsequent to the carving of the figures on the face of the stone, because it is interrupted by the upper tip of the tail of the fish, and shifts outwards a little when it resumes its course underneath the lower tip. It follows, therefore, from these facts that any supposition of the ogham inscriptions being possibly older than the elaborate carving of the faces of these monuments is wholly inadmissible. It remains, however, an open question whether the addition of the inscriptions in these cases was really so much later than the erection of the monuments as to imply that they belong to a different period from the sculptures, since these indications might merely mean that the inscription was carved after the monument was otherwise completed and probably added by a different hand from that of the sculptor. It is at least conceivable that the man who was a good carver of the symbolic representations was not necessarily a skilled adept in oghams, and that the inscriber was called in after the sculptor had finished his work.

¹ See the illustration at p. 189 in Part III.

² See the illustration at p. 132 in Part III.

³ See the illustration at p. 48 in Part III.

With regard to the subject-matter of these ogham inscriptions, it must be said that the Scottish examples are not only as a class more difficult to decipher than those of Ireland and Wales, but that most of them are detached fragments of epigraphs, incapable even when correctly deciphered of yielding intelligible results. Of the whole number found in Scotland only four are presumably complete and in such a state of preservation as to warrant the expectation that they might be read. But a comparison of the various results of the attempts that have been made by those most skilled in epigraphic and linguistic research serves only to show that final conclusions, whether as to the texts or their interpretations, are not yet possible. Fortunately, for the present purpose, the completeness or incompleteness, and the legibility or illegibility of the inscriptions taken singly, are matters of minor importance.¹

Although the Bressay inscription, for instance, is apparently as legible as any of the series, it is by no means free from conjectural readings. But, apart from the question of which of the various readings may be the most correct, there is a general consensus as to the occurrence in the inscription of the name Naddod, and the Norse word *dattr*, in the sense of its being commemorative of the daughter of a person of that name. The fact that this Norse word is used in preference to the Celtic word for daughter, found in ogham inscriptions in other parts of the Celtic area, shows that at the time when this inscription was carved the Norse language had become naturalised in Shetland, and we know historically that this did not take place till in or shortly before the time of Harald Fairhair, or in the last half of the ninth century. And at this very time, as the *Landnamabók* tells, a Norwegian Viking, by name Naddod, frequented these seas, and in the autumn of A.D. 861, being blown out of his course by a furious storm, became the discoverer of Iceland. An important limitation of time is thus arrived at, altogether apart from the details of disputed readings; for it is established that the ogham characters were in use in Shetland as late at least as towards the close of the ninth century. It may be asked why the daughter of a Norwegian Viking should have her epitaph carved in Celtic oghams, and not in Scandinavian runes. But it appears that there may be two epitaphs on the Bressay monument,² and that the second one apparently commemorates a person named Benrcs or Bernis Mecudroi, a patronymic of Celtic form, which seems to be paralleled in the name of the

¹ The really important results of a purely archaeological investigation of the inscribed monuments are not dependent on such questions as whether this or that inscription is complete or correctly transliterated and translated, but upon such questions as whether it can be correlated with other inscriptions in such a manner as to show that it is one of a distinct group or class characterising a definite area, and pertaining to a period of time approximately definable either by archaeological or historical limitations.

² This inscription has been generally read as consisting of two parts and commemorating two persons, both parts ending with the word *ann*, which is explained conjecturally as meaning *here* and equivalent to the *hic* of the common Latin formula. Professor Rhys, however, reads both as one formula relating only to the daughter of Naddod.

Colonsay robber Erc Mocuadruidi, whose story is given by Adamnan.¹ The Viking Naddod had a grandson named Benir, and if it be the case that the monument is a double one, as the double recurrence of the formula seems to indicate, it may be that of a Norwegian mother and her son, erected by the Celtic husband and father. Even in the ninth century intermarriages between the Norwegian immigrants and the Celtic inhabitants of the Northern and Western Isles were not unexampled, though probably the cases in which the husband was a Celt and the wife a Norwegian were exceptional.² One other of the inscriptions from the Northern Isles, that found in the Broch of Burrian, North Ronaldsay, Orkney, seems also to show the influence of the Norse language in the formula of the ogham epigraph, although it is accompanied by a cross of the Celtic form.³

The really important outcome of the investigation is that the series of ogham inscriptions in Scotland seems to begin with one which corresponds in character with the Irish and Welsh types, and ends with one which cannot be earlier than the latter part of the ninth century.

III.—BILINGUAL INSCRIPTIONS.

There is only one monument of the bilingual type in Scotland, that known as the Newton Stone, in Aberdeenshire, which has hitherto resisted all attempts at consistent transliteration and intelligible translation. Here it is only dealt with archæologically,—by correlating its features of character with those of one or other of the known classes of monuments peculiar to the British area. There can be no relevant comparison with any class of monuments beyond that area, because its inscription is a bilingual of which one of the legends is in the ogham character, and both oghams and ogham bilinguals are absolutely peculiar to the British area. Relevant comparison must proceed upon the principle that the example to be compared cannot be assumed to violate the general rules of the type to which it belongs. Being an ogham bilingual it is therefore to be presumed, from the invariable analogy of all other known ogham bilinguals, that the epigraph in alphabetic characters which accompanies the ogham is in the Latin language and in the letters of the Roman alphabet. Its letters, however, are not obviously recognisable as the Roman capitals⁴ in which we

¹ Adamnan's *Life of St Columba*, lib. i. cap. xxxiii.

² An instance in point is recorded in the *Orkneyinga Saga*, where it is stated that Dungad, the Celtic Earl or Maormor of Caithness, married Groa, the daughter of a Norwegian Viking, Thorstein the Red, circa 875. The *Egils Saga* states that Olaf the Red was Scotch on his father's side, but Danish on his mother's side, and adds that in Northumberland nearly all the inhabitants were Danish by the father's or mother's side, and many by both.

³ See *Archæologia Scotica*, vol. v. p. 349, and pl. xlvi. ; and also p. 23 *infra*.

⁴ Familiarity with the forms of the letters used in late Roman and early Christian inscriptions of the Cisalpine region of the Roman Empire prepares the student of the Christian epigraphs of the remoter provinces for almost any amount of debasement, especially of the minuscules, whose forms were less simple and more subject to local variation.

find the Latin legends of the Welsh, Devonian, Cornish, and Irish bilinguals expressed. But there is one Irish monument of biliteral if not bilingual type in which the legend accompanying the ogham is in minuscules, and minuscules are sometimes found mixed with the capitals of the bilinguals in Wales and South Britain. Minuscules did not come into general use in Western Europe till the seventh century. All early inscriptions and early manuscripts used capital letters only, but there was a time, between the period of the general use of capitals and the general use of minuscules, when intermediate forms were used, and a mixture of different varieties in a single inscription was not uncommon. Also in regions from which the direct influence of Roman culture had been removed the language and lettering became more and more debased, as the original impression on the barbarian culture faded. Such debased inscriptions in what are obviously meant for Roman letters on the belt-clasps from Burgundian graves are occasionally found to be quite illegible from the deformation of the lettering. Inscriptions in exceedingly debased Roman lettering also became not uncommon in Britain after the introduction of minuscules, although the earlier group of inscriptions in capital letters had always been fairly legible. In this later period of mixed and minuscule inscriptions in debased lettering there is also a general return to the older custom of placing the inscription on the monument in horizontal lines. The inscription which accompanies the ogham on the Newton Stone is so placed, near the upper end of the broadest face of the monument, which is a tall unshaped monolith of gneiss. By its analogies, therefore, it must be held to be later in date than the primary type of bilinguals with Roman capitals, much less debased, and placed on the stone vertically. Many of the inscriptions in Wales present literal forms quite as debased as those of the Newton Stone, the difficulty with its alphabetical inscription being that almost every letter is so exceedingly debased.¹ Hübner, who considers that monuments inscribed in minuscules can scarcely date earlier in Britain than the middle of the eighth century, regards the lettering of the Newton Stone as debased cursive. But there can be no doubt that it bears a close affinity to the debased inscriptions on the Welsh and Cornish monuments, and specially to those at Llanlear, in Cardiganshire, Llandysilio, in Pembrokeshire, St Cadfan's Stone at Towyn, in Merionethshire, and the stone at Phillack, in Cornwall.

The Newton Stone must, therefore, be regarded as an outlying member of the class

¹ As Dr Whitley Stokes has said, "its attempted decyphrement has been a long and blundering business, and it has been read into Punic, Syriac, Greek, Latin, French, Icelandic, and various kinds of gibberish." Recently, however, it has been attempted on more rational lines. But the discrepancies among the various transliterations are still too numerous, and each particular version has too many difficulties in the way of its acceptance as a final solution of the problem presented by the double inscription. For details of the inscriptions see papers by the Earl of Southesk, in the *Proceedings of the Society of Antiquaries of Scotland*, vol. xviii. p. 180, and Professor Rhys, vol. xxvi. p. 263, and also *Origins of Pictish Symbolism*, by the Earl of Southesk, p. 55. For earlier readings, see *Proc. Soc. Ant. Scot.*, vol. v. p. 224; vol. vii. p. 11; vol. x. p. 134; and vol. xx. p. 298.

of bilingual monuments which have their principal development in Wales, and of which there are outlying members in Devonshire, Cornwall, and Ireland. The type of this class of monument is that of an erect but unshaped stone, having an inscription almost invariably in Roman capital letters (but sometimes mixed with minuscules) incised on the face of the stone, and an inscription in ogham characters on the edge of the stone. It is a general characteristic of these bilinguals that the one inscription is more or less an echo of the other.¹ It follows from this that if the ogham inscription on the Newton Stone could be deciphered, we should possess, presumably at least, the purport of the other inscription, which is so remarkable for its illegibility. But unfortunately there is nearly as much diversity of opinion as to the correct reading of the ogham inscription as there is of the other; and though it is generally agreed that the stone is a commemorative monument like all the others of its class, the formula of commemoration is still unsettled in either of its duplicate renderings.

IV.—INSCRIPTIONS IN MINUSCULES.

Of minuscule inscriptions there are only two in Latin, one being a portion of a cross-slab found at Brechin,² and now in the Chapel at Aldbar, which bears a representation of the Virgin and Child, with the inscription S[ANCTA] MARIA M[ATE]R $\overline{\text{XPI}}$, the contracted word for CHRISTI being in Greek letters. The other is a small slab from Papa Stronsay, with the three letters DNE.

Other two minuscule inscriptions—at Fordoun, in Kincardineshire, and St Vigeans, in Forfarshire—are not in Latin, but in the vernacular. The inscription at Fordoun is on the face of a large cross-slab sculptured with interlaced-work, symbols and a hunting-scene. It consists merely of seven or eight letters which are partially defaced, so that the reading is doubtful, though they are clearly minuscules.

The monument at St Vigeans³ is a rectangularly shaped slab with a moulding round the edges, and sculptured in bold relief on both faces and both edges. The obverse shows an ornamented cross of the Celtic form, the spaces on either side of the shaft being filled with figures of animals. The reverse bears a stag-hunt at the top and a boar-hunt at the bottom; under the stag-hunt are three of the peculiar symbols so characteristic of the monuments of this period and area. Underneath these are beasts, and an eagle eating a fish. One edge of the stone has a scroll of wavy foliage with triplets of fruit. On the other edge is a pattern of interlaced work running from the

¹ For instance, on the face of the stone at St Dogmael's, in Pembrokeshire, is the inscription in Roman capitals SAGRAMI FILI CVNOTAMI, and on the edge in oghams SAGRAMNI MAQI CVNATAMI; while the monument at Cilgerran, in the same county, reads, in Roman capitals, TRENAGVSSI FILI MACVTRENI HIC JACIT, and in oghams TRENAGVSV MAQI MAQITRENI.

² See the illustration at p. 250 in Part III. ³ See the illustration at p. 236 in Part III.

top to within a few inches of the bottom, under which is a panel on which the inscription is incised, in letters closely resembling those of the Irish lapidary inscriptions of the ninth century. It consists of twenty-four letters arranged in three complete lines and part of a fourth, which ends about the middle of the panel, and the whole of the lower part is blank. The inscription begins and ends with two well-known names, DROST or DROSTEN and FORCUS or FERGUS, and seems also to contain a third name, VORET or VORETETT, equivalent to the Pictish name Ferath or Feredeth. But if the last letter of the first line could be read as R instead of N,¹ the inscription would consist of four names, DROST, ERIPE, VORETETT, FORCVS, equivalent to the Drost, Erp, Feredeth, and Fergus of the list of the Pictish kings.

A few inscriptions in minuscules of the Irish type occur at Iona. They are in the vernacular Gaelic and not in Latin, and the lettering is the very late variety of minuscules which came to be generally used in the lapidary inscriptions as well as in the manuscripts, both in this country and in Ireland. One of these stones bearing the inscription [OR DO MAELFATARIC], preceded by an equal-armed cross of the same size as the letters of the inscription, has been assigned to Maelpatrick O'Banain, whose death is recorded in the Annals of the Four Masters under the year 1174. Another, which is associated with a long-shafted cross of Celtic form having the arms, shaft, and summit connected by a circle, and semicircularly recessed at the intersections, reads [OR AR ANMIN EOGAIN]—Pray for the soul of Eogain. Several other slabs with similar crosses incised upon them have similar inscriptions, but in general the names are illegible,² and the most that can be said of them is that they are late examples of the Irish type with the formula "Pray for—" or "Pray for the soul of—"

V.—INSCRIPTIONS IN HIBERNO-SAXON CAPITALS.

All early inscriptions in Roman capitals are in the plainer forms of these letters. More varied forms in which the horizontal bars were placed obliquely, and feathered at the ends, or the vertical bars prolonged above and below their junction with the horizontal bars, and the curved letters made angular, were introduced at later periods. The increased prevalence of writing and the adoption of minuscules as more suited for general use in manuscript than the stiff and angular forms of the capital letters gradually brought about a change from the majuscular to the minuscular style in the lapidary inscriptions also. In Britain, the oldest dated manuscript—the Book of the

¹ The difference between the round-headed forms of the R and N in some of the Irish manuscripts is so slight as to be scarcely appreciable. See the facsimile of the Metz Gospels in Miss Stokes's *Early Christian Art in Ireland*, p. 45.

² One of these seems to read [OR DON GILLIAN] and another has two inscriptions, one being on each side of the cross; they seem to read [OROIT AR ANMIN FLAIND] and [OR AR ANMIN . . . CAIND].

Gospels of Lindisfarne, of the close of the seventh or commencement of the eighth century—shows this change of style in combination with a remarkable development of ornamental capital letters. The manuscripts of this style and period, preserved in different parts of England, are elosely allied to the early manuscripts of Ireland, both by their peculiar style of lettering and special varieties of ornamentation, and have therefore been distinguished as Hiberno-Saxon.

There are no manuscripts of this period preserved in Scotland, but inscriptions in capital letters resembling those found in Hiberno-Saxon and Irish manuscripts have been found in two localities in Scotland—at Lethnott in Forfarshire, and Tarbat in Ross-shire. Both are unfortunately mere fragments. The first, which was found some years ago beneath the floor of the church at Lethnott, is apparently the summit of a small cross, broken off at its junction with the arms.¹ One side is ornamented with spiral and interlacing patterns, and on the other, which bears no ornament, are three lines of an inscription, of which the first line is so much obliterated as to be quite illegible. The other two lines read plainly enough FILII MEDICII. The lettering is similar to that used in Irish and Hiberno-Saxon manuscripts after the commencement of the eighth century.

The Tarbat inscription was discovered at Invergordon Castle by Mr J. Romilly Allen, when engaged on his survey of the monuments, in the summer of 1890. It had been built into the dyke of the manse garden at Tarbat, and it was removed many years ago by the proprietor of the adjoining lands to Invergordon Castle, but its true character and interest as an inscribed monument of this early period remained unknown till Mr Allen's visit. It is but a small fragment of what must have been a monument of considerable size, sculptured with Celtic ornamentation, and bearing the longest inscription of its kind of which any indication has come down to us.² On one side there is a small portion of a spiral pattern, and on one edge is the termination of an interlaced pattern, and below it an inscribed panel mutilated along both edges, and bearing nine successive lines³ of an inscription which seems to read—IN NOMINE IHV XPI CRVX CHRISTI IN COMMEMORATIONE REO . . TII. The formula is not uncommon in documents of seventh and eighth centuries as well as on monuments.⁴

¹ See the illustration on p. 262 in Part III. ² See the illustration at p. 73 in Part III.

³ The seventh line stops short of the width, leaving a blank space, as if to indicate a break in the continuity of the inscription. The eighth line is much mutilated, and of the ninth only the traces of the tops of some of the letters remain. Dr Joass has suggested REQIESCAT IN DNO, as apparently answering to the uncertain traces of these two lines.

⁴ As for instance, In nomine domini nostri salvatoris IHV XPI, commencing a charter of Hlodhar of Kent, A.D. 679, which continues to be the formula for charters till those of Aethilbert, A.D. 740. In those of Coenwulf of Mercia, A.D. 811, it is In nomine di summi regis eterni. Compare the lapidary formula IN NOMINE D[E]I SVM[M]I on the crosses at Cricchowel, Margam, and Llantwit. Variations of the same formula occur on the monuments of Gaul and Italy.

VI.—INSCRIPTIONS IN RUNES.

There remains another class of inscribed monuments of the period prior to the twelfth century,—those that are inscribed in runes.¹ They belong chiefly to the period of the Norse domination of the northern and western isles, and none of them can be earlier than the close of the eighth century. They are inscribed in Scandinavian runes, and their characteristics are those of late runic inscriptions in Norway and Sweden, with some peculiarities of local origin. A few fragments have been found in Shetland,² the most complete being a stone found at Cunningburgh, which shows the distinctively Scandinavian formula: “. . . . raised this stone after his father.”

A broken cross, 2 feet 9 inches in length,³ was discovered at Thurso, lying on the top of a stone-lined grave about 3 feet under the present surface. It bears a simple incised cross on the central part of the cross-head, and an inscription in Scandinavian runes along one side of the shaft and reading from the bottom upwards—“made this overlay after Ingulf, his father”—the name of the person who made the monument being unfortunately wanting.

A broken cross of slate, found on the site of the old burying-ground connected with the chapel of St Marnock on the Island of Inchmarnock, off the west coast of Bute, bears in Scandinavian runes an inscription incised across the central part of the cross-head—(raised) “this cross to Guthleif.”⁴

Only one complete monument with a runic inscription of the Scandinavian type exists in Scotland. It stood in the churchyard of Kilbar, in the Island of Barra, and is now in the National Museum. It is a rough unshaped slab, about 4 feet high and 16 inches wide at the broadest part. On one side is a boldly carved runic inscription, which Professor Stephens has read as follows:—“Ur and Thur erected this stone after Raskur—Christ rest his soul.” The other side of the stone has a long-shafted cross of Celtic form decorated with interlaced work,⁵ the spaces at the sides being filled with spirals

¹ The Runic inscriptions in Maeshow do not belong to the same category. See the translations of them by Professor Munch and others in Farrer's *Maeshowe*. See also a paper by G. Goudie on rune inscribed relics of Norsemen in Shetland in the *Proceedings*, vol. xiii. p. 136.

² In the Isle of Man, which once belonged to Scotland, there is a considerable group of monuments, some being long slender crosses with circular heads (a form unknown in Scandinavia), and others of headstone form like those of Scotland, and decorated with modifications of Celtic patterns. About twenty-two bear inscriptions in runes, containing upwards of thirty names, of which about half-a-dozen are Celtic and the rest Norse. Five have ogham inscriptions of the Scottish type. In one of these cases there are two ogham inscriptions on the two faces of the cross, which has also two lines of runes on the reverse; while the obverse is sculptured with interlaced-work, a hunting-scene, a harper, and other figure-subjects like the Scottish monuments. See Cumming's *Manx Crosses*, and Kermodé's *Catalogue of the Manx Crosses*.

³ See the illustration and description on p. 37 in Part III.

⁴ See the illustration on p. 413 in Part III., and also in the *Proceedings*, vol. xxiv. p. 438. For the runes inscribed in St Mollo's Cave, Holy Island, Arran, see *Proceedings*, vol. xvii. p. 45.

⁵ See the illustrations on p. 114 in Part III.

and fret-work in the style common to Celtic monuments but altogether different from the decoration of the few monuments in Scandinavia that are decorated.

These monuments inscribed in Scandinavian runes are an extension westwards of the monumental system of Scandinavia as the earlier monuments inscribed in Roman capitals are an extension westwards of the monumental system of the later Empire after Britain had ceased to be part of the Empire. In both cases the extended system was strongly modified by local influences, and in both cases it ultimately gave way to the purely local style.¹

A group of inscriptions in Anglian runes is found in the north of England, some of which may be of earlier date than those of Scandinavian derivation in Scotland. To this group probably belong the fragmentary inscriptions of five or six letters each, incised on stone crosses, found in St Ninian's Cave, Glasserton, and in the churchyard of the Priory at Whithorn. Among the Northumbrian monuments bearing inscriptions in Anglian runes, the cross at Bewcastle is remarkable for its close resemblance in the style of its art to the cross at Ruthwell in Scotland.

In the great cross at Ruthwell, Scotland possesses one monument, the only one, it may be said, in the whole area of Western Europe, which has the unique interest of a literary codex, preserving the only known text of a religious poem in the old North Anglian dialect. It is not a sepulchral memorial, but belongs to the class of ecclesiastical High Crosses, erected and sculptured and inscribed with a devotional purpose. It is of sandstone, about 17½ feet high, the shaft being 2 feet in breadth and 15 inches in thickness at the base.

The story of this cross strikingly illustrates the vicissitudes to which all such monuments are exposed in a country which leaves its national monuments to the mercy of local circumstances. Although it had apparently passed safely through the crisis of the Reformation, it was overthrown as a monument of idolatry in 1672, and its shaft was seen by Pennant, a century afterwards, lying on the floor of the church, close to the former site of the High Altar. Soon afterwards, when the church came to be reseated, it was ejected into the churchyard, where it remained till, in 1802, the worthy minister of the parish, Rev. Dr Duncan, removed it to the garden of the old manse, and set it up with the transverse arms supplied from a design of his own, and the summit, which had been found in digging a grave, restored to its place. A few years ago, by means of subscriptions collected by the late minister of the parish and a small grant-in-aid obtained from Government through the Inspector of Ancient Monuments, an apse was added to the church and the cross removed to its shelter.

¹ It has to be remembered that the Scandinavian countries retained their heathenism for fully four centuries after Scotland and Ireland had been completely Christianised. It was not till the commencement of the eleventh century that Christianity became general in Scandinavia. The monumental system of the Scandinavian countries, therefore, commences with inscribed monuments showing no Christian influence, but on the other hand, scarcely indicating Paganism. But the great majority of the runic monuments of Scandinavia are of Christian character.

The cross is elaborately sculptured on all its four sides.¹ On its broad faces the sculptures are arranged in panels, surrounded by broad flat borders, on which are carved a series of inscriptions having reference to the subjects represented. These subjects are chiefly from the New Testament and the inscriptions are from the Vulgate text. They are the Salutation of the Virgin, with the text *INGRESSUS ANGELUS*, etc.; the healing of the man blind from his birth, with the text *ET PRÆTERIENS VIDIT*, etc.; Mary Magdalene anointing the feet of Christ, with the text *ATTULIT ALABASTRUM UNGUENTI*, etc.; the Visitation of Mary by Elizabeth, the inscription here being illegible. These four subjects occupy the whole of one face of the shaft, and are placed vertically in the order in which they have been described, from the base upwards to the intersection of the arms of the cross. In the space just under the intersection is a small panel containing the figure of an archer shooting with a bow, and above the intersecting arms (which are modern) there is on the broad face of the upright member or summit of the cross a human figure and a bird, apparently intended for St John with his symbol of the eagle, and around the border the opening words of his gospel—*IN PRINCIPIO ERAT VERBUM*.

The subjects on the opposite face of the cross are the flight into Egypt, with the inscription *MARIA ET IOSEPH*; a scene from the legendary life of St Anthony, related by St Jerome, which presents St Paul the Theban, and St Anthony, breaking a loaf of bread between them, the inscription reading *SCS PAULUS ET ANTONIUS FREGERUNT PANEM IN DESERTO*; a representation of our Lord trampling on two dragons with heads like swine, the text of the inscription being taken from the apocryphal gospel of the Nativity: *IHESUS XRS JUDEX AEQUITATIS; SALVATOREM MUNDI BESTIÆ ET DRACONES COGNOVERUNT EUM IN DESERTO*; above this is the figure of John the Baptist standing on two globes, and bearing on his breast the Agnus Dei supported by his left hand, while he significantly points to it with the right. The inscription is illegible, but of course it could only have been the "Ecce Agnus." The figures of the principal personages are nimbed, and that of our Lord is distinguished by the cruciferous nimbus. The inscriptions are in Roman capitals, but in a peculiar style of angular and attenuated lettering, resembling that on the coffin of St Cuthbert of seventh century.²

The two narrow sides of the cross are occupied by a scroll of foliage with beasts and birds lodging in the branches and eating of the fruit. On the raised borders of the long panels inclosing the scroll-work, is an inscription in Anglo-Saxon runes which, after baffling the efforts of many scholars, was at last deciphered by Mr J. M. Kemble, in 1840. It proved to be a portion of a poem of which no other copy was then known, the language being Anglo-Saxon and the dialect North Anglian. The subject was the

¹ See the illustrations at pp. 443, 444 in Part III. See also Stephens's *Old Northern Runic Monuments*, vol. i. p. 405; *Archæologia*, vol. xxx. p. 31; *Archæologia Scotica*, vol. iv. p. 313; Victor, *Die Northumbrischen Runensteine* (1895), p. 2.

² See Raine's *St Cuthbert*, Plates II., III., and VIII.

Crucifixion, and the form in which it was presented was the highly poetical conception of the personified cross, itself relating its unwilling part in the great tragedy. The sequence of the text is broken at several points in consequence of the partial obliteration of the inscription, but freely translated it reads as follows, first down the one side of the panel and then down the other:—

Prepared himself God Almighty
When he would the cross ascend
Courageous before all men
Bow [durst not I]

I raised the mighty King
Heaven's great Lord;
Fall down I dared not—

They reviled us two
Both together
I with blood stained
Poured from [the man's side]

Christ was on the Rood
Lo! thither hastening
From afar came
Nobles to him in misery—

I that all beheld;
I was with the wound of sorrow
Stricken—

With shafts all wounded
They laid him down limb-weary—
They stood by him at his corpse's head
Beholding [the Lord] of Heaven

In a manuscript, subsequently discovered at Vercelli, containing a number of homilies and poems of a religious character in the South Anglian or Wessex dialect of the tenth century, Mr Kemble had the satisfaction of finding a version of this poem in which the corresponding passages can be identified without difficulty.

But the story of this unique monument is now well-known, and its exceeding interest fully recognised. It is not so well-known that there are in Scotland upwards of thirty inscribed monuments of the seven early Christian centuries, say from the fifth to the twelfth, a period of which we have scarcely any literary or linguistic remains to compare with these dilapidated remnants.

III.—THE SYMBOLISM OF THE MONUMENTS.

Monumental symbolism like monumental epigraphy is modified in its expression by the prevailing style of art of the period, or of the area to which it belongs. But in their essential elements all systems of symbolism are singularly constant to their originally accepted forms. Art may refine and beautify them, but the symbolism of the crude, unbeautiful, and originally simple form remains the same as that of the most artistically designed and decorated variant. Hence it is advisable to consider the symbolism of the monuments in the first place apart from the art which, though it modifies and beautifies the symbolic forms, makes no attempt to alter their hidden significance, and gives no clue to the conditions which may account for the prevalence of their monumental use.

The symbolism of the Scottish monuments exhibits two principal phases distinguishable as pertaining to the Romanised and to the un-Romanised areas. The

symbolism peculiar to the Romanised area south of the wall of Antoninus, consisting solely of the monogram P and the forms of the cross derived from it, is due to the extension northwards of the proto-British type of monument, and is confined to the area of the influence of St Ninian's mission.

The symbolism which characterises the monuments of the un-Romanised area north of the Forth is much more complex and recondite in character, and presents numerous problems which, in the present state of our knowledge, are apparently insoluble.

It is divided into three distinct phases corresponding to the three classes of the monuments already indicated, viz. :—

- (1) The symbolism of the rude, unshaped, and incised monuments of Class I., consisting of a series of arbitrary symbols chiefly of geometrical but partly of animal forms and pictorial representations of objects of common use.
- (2) The symbolism of the shaped and surface-dressed monuments of Class II., sculptured in relief, consisting of the figure of the cross chiefly in its long-shafted form, glorified or decorated, occupying the principal place upon the monument and accompanied by the arbitrary symbols of the previous phase, placed in subordinate positions, and by a system of animal symbolism and figure subjects chiefly Scriptural.
- (3) The symbolism of the free standing crosses and other advanced types of monuments of Class III. distinguished by the absence of the arbitrary symbols, and consisting of the cross occasionally showing the Crucifixion, Scripture subjects, hunting scenes, and figures of animals real and fabulous.

The geometrical or conventional figures or symbols incised on the monuments of Class I. present a remarkable constancy of form, variable within certain limits but never so far as to obscure their individual identity. They do not present any obvious sequence of progression from simple or elementary forms, those that are apparently the oldest being often as fully developed as those that are apparently the latest. There is, therefore, no possibility of tracing the different forms back to their sources of origin, and thereby approaching the question of their primitive derivation, and through it of their significance.

“There may have been a stage in the process of development of the symbolism they embody in which there may have been a more evident suggestion of some association of ideas between the thing seen and the thing signified. But it is plain that when once a break has taken place in the transmission of the knowledge of the arbitrary significance of such conventional symbols, that significance would almost certainly be irrecoverably lost. And it is equally evident that in such a case it might be absolutely impossible by any method of comparison and induction to recover their

significance, because it is never possible to deduce final conclusions from manifestly incomplete evidence, and we have no certainty that we have recovered all the symbols or that we have yet seen all the forms assumed by the same symbol.”¹

Among the geometrical or conventional symbol-forms there are three which are distinguished from the rest by the common characteristic of the presence of a floriated rod singly bent, or doubly bent, across the symbol. The singly bent rod is combined only with the crescent (No. 124) and the arch-shaped symbol (No. 129). The doubly bent rod is combined with three different symbols, the double disc (No. 121), the house-like symbol (No. 139), and the serpent (No. 161).²

But the manner in which these symbols enter into combination with the rods is evidently governed by some restriction which prevents the combination taking place in a haphazard way. The distinction between the appendages characteristic of each separate symbol is constant. The crescent may appear without the V-shaped rod and the double disc without the Σ -shaped rod, but the crescent never has the Σ -shaped rod nor the double disc the V-shaped rod. There is, therefore, something in the special form of the V-shaped rod which is appropriate to the crescent symbol and not appropriate to the double disc symbol, and, conversely, there is something in the special form of the Σ -shaped rod which is appropriate to the double disc and not appropriate to the crescent symbol.

The manner in which the different symbols combine with their respective rods is also constant. The crescent always combines with its singly bent rod so that the bent angle is placed below the concavity, with the floriated ends rising over the convexity of the crescent. This invariable rule is adhered to even in cases where the crescent stands vertically³ or even reversed.⁴ The double disc always combines with its doubly bent rod so that, whether the rod is bent from left to right like a Z or reversely Σ , the floriated ends extend in a direction parallel to the longer axis of the symbol. Also when the doubly bent rod combines with the oblong figure, or house-like symbol, whether the form be that of N or of \mathcal{N} , the floriated ends of the rod invariably extend in a direction parallel to the longer axis and to the vertical sides of the figure. In the case in which the doubly bent rod is combined with the serpent there is more variability, but it seems to be demonstrated that each symbol to which the floriated rod is applied can only be combined with its own rod in one particular way.

Each of these composite symbols, however, is occasionally used alone, or without its rod, but the rod in any of its forms never occurs by itself, or apart from combination with the symbols to which it is appropriate.

¹ *Scotland in Early Christian Times* (second series), p. 180. Three examples of a previously undescribed symbol have been discovered since this passage was written.

² The numbers refer to the figures in the list of the different symbols and their localities in Part II.

³ As at Rossie Priory, Monifieth, Dunfallandy, and Dunrobin.

⁴ As at Old Deer, if the incised cross on the reverse be a guide to the original position.

It appears, therefore, as if the singly and doubly bent rods would have had no signification by themselves, although the symbols with which they occur in combination must have had a separate significance, seeing that they occur occasionally without the rods. It is, of course, impossible to say with certainty whether the significance of the symbols which combine with the rods is the same when they stand alone as when they occur in combination with the rods, but the circumstances seem to suggest that the function of the rods is either to produce a modification of the significance of the symbols or an addition to it.

Nothing analogous to the use of the doubly bent rod has been observed either in the illuminations of Irish manuscripts or in ecclesiastical sculpture, but the V-shaped rod presents a certain resemblance to the manner in which the two floriated sceptres are held in the hands of the figures of royal or sacred personages in illuminations of the ninth and tenth centuries,¹ the lower ends touching or slightly crossed in front of the breast and the floriated ends spreading apart over the shoulders. The same resemblance may be traced in the manner in which the floriated sceptres are held in the hands of the nimbed figure on the enamelled face of the Jewel of Alfred.² A floriated sceptre and a cross held in a similar manner appear in the hands of some of the figures on the Breac Mœdog or shrine of St Mogue,³ and of the nimbed figure of St Luke in the Gospels of St Chad.⁴ The representations of Christ in Glory sculptured on the Irish high crosses, on the opposite face from the Crucifixion, have generally a floriated sceptre in the right hand and a cross of equal length in the left, held with their lower ends touching each other.⁵ A similar arrangement of flowering rods is associated with the symbols of the Four Evangelists in the Book of Kells. Single floriated rods or sceptres in the hands of saints and angels occur in many of its miniatures, and occasionally also on the monuments.⁶

It is to be noticed also that while the V-shaped rod exhibits no decided variation

¹ On an embroidered robe of St Cyriacus of the tenth century at Wurzburg is the representation of a king, crowned, and holding two floriated sceptres crossed. In the illuminations of the ninth century MS. of the *Leges Longobardorum*, the figure of Raxis Rex holds in the right hand a long sceptre floriated both at the upper and lower ends; Ludovicus Rex holds a short sceptre floriated at the upper end only. Hefner Alteneck, *Trachten und Bildwerk*, vol. i. pls. 16, 29.

² Figured in the *Archæological Journal*, vol. ii. p. 165, and in Shaw's *Dresses and Decorations*, vol. i. pl. 2. The figure has been supposed to be a representation of the Saviour.

³ See *Archæologia*, vol. xliii. pls. 16, 18; Westwood's *Palæographia Sacra*, and Romilly Allen's *Early Christian Symbolism*, p. 169.

⁴ Unless the figure which is nimbed, seated in a chair of state, and surmounted by the winged ox, the symbol of St Luke, may be taken for that of the Saviour, St Luke being represented by the symbol only.

⁵ O'Neill's *Irish Crosses*, pls. 10, 16, 22, 28, and 31.

⁶ As at St Vigean's. In the sculpture on the font at Cowlam, representing the Magi offering their gifts, the Virgin appears enthroned and crowned, and holding a floriated rod in the right hand, while with the left she holds the child seated on her knee. Allen's *Early Christian Symbolism*, p. 197.

of form, the doubly bent or Σ -shaped rod exhibits variations in two cases—both being in connection with its application to the serpent. At St Vigean's it is applied to the serpent so that the terminal portions are quite short and bent at right angles in opposite directions from either end of the long, straight middle part. At Inverury, on a stone which also bears the crescent with the V-shaped rod and the double disc with the doubly bent or Σ -shaped rod, the serpent occurs between them with a perfectly straight rod across it, ending in simple scrolls. At Logierait the rod applied to the serpent is also a straight rod, without the opposing terminals, and instead of the usual conventional flourishes, one of its ends appears as if producing buds or leaves. This seems to suggest that the idea underlying the representation of the rod was that of a living and leaf-bearing or blossoming branch or tree. The serpent appears in early Christian symbolism in two very different characters. In the symbol-picture of the Temptation of our First Parents it is present as the symbol of the devil, and is usually shown convoluted on the stem of the tree of knowledge. In the symbol-picture representing the Healing of the Israelites, the serpent uplifted on the pole is the symbol of Christ uplifted on the cross for the healing of the nations. In both cases the essential features of the symbol-picture are a serpent and a tree, and if we had no other example of the combination than that at Logierait, it might not unreasonably be taken for a shorthand expression of the symbol of the Fall, or of the Redemption. The picture symbol of the brazen serpent on its pole is shown in this manner on the ivory easket at Breseia.¹ But in the absence of evidence of a more conclusive character it is impossible to go further towards the determination of the definite significance of these symbols.

With these purely geometrical and conventional symbols there are associated figures of animals, sometimes naturalistic, but often more or less conventional, and figures of objects of known character and use, all of which, from their positions and associations on the monuments, appear to be also symbols. The naturalistic representations of animals are drawn with spirit, and the features of their distinctive characters are more or less faithfully rendered. The animals so used are the bull, the boar, the horse, the stag, the tiger or wolf, the eagle, the serpent, and the fish.² Occurring more frequently than any of these, however, there is the conventional beast form³ with the long jaws, the elongated crest and the scroll feet (No. 147). There is also a beast bust, like the head and neck of a dog (No. 155), which is in some cases specially associated with the symbol of the double disc⁴ and seems to bear some analogy

¹ See Garrucci, *Storia dell' Arte Cristiana*, vol. vi. pl. 444.

² The animals figured on the early Christian monuments of Gaul are the lamb, the sheep, the horse, the stag, the peacock, the dove, and the fish.

³ Often called for convenience "the elephant symbol," as the double disc has been called "the spectacle ornament," though no connection with either the elephant or with a pair of spectacles is intended by the appellation.

⁴ As on the Norries Law silver plaques.

to the bust of the ass placed beside the figure of the child in the symbol-picture of the Nativity. Of the objects of known character and use which are thus associated both with the conventional symbols and animal forms, the most common is the double symbol of the mirror and comb (No. 140), while such other known objects as the shears, the pincers, the hammer, the anvil, and the crosier occur much more rarely.

It seems clear, from the manner in which all these representations are placed on the monuments, whether singly or in various associations with each other, that the intention is the same throughout, and that if some of them, such as the geometric figures, are conventional symbols and can be nothing else, the others must be present as symbols also. It may be admitted that no one ever carved a mirror or a comb upon a monument merely as a picture of the object. And it can hardly be affirmed that a limited number of animal forms and of objects selected from among the commonest articles in everyday use were preferred for representation in monumental sculpture for the simple pictorial effect, or repeated on the monuments of many generations, unless for their symbolic import—whatever that may have been.

These objects of known use and creatures of known characteristics are often so placed in relation to the conventional symbols and the conventional beasts as to suggest that their import supplements that of the unknown symbol-forms. In other words, they are there along with the unknown symbol-forms as part of the undecypherable story with which the monument is symbolically inscribed.

It is a peculiarity of the arrangement of the mirror and comb symbol, when in combination with others on the monuments of Class I., that these two objects are almost always placed last or lowermost.¹ Whatever, therefore, might be the significance of the story told by the other symbols placed over the mirror and comb, we can at least say that that significance was intended to be supplemented by the import of these two symbols, whatever that might be. Apart altogether from the question of significance, however, this peculiarity in the grouping of the symbols, which places the mirror and comb last or lowest in the group, is suggestive of a method in the grouping.

The comb had a ceremonial use in the ritual of the Church, and might on that account be used as a symbol in monumental sculpture, as the chalice was used at a later period. It was one of the symbolic relics buried with ecclesiastical personages, as the chalice was. St Cuthbert's comb was buried with him, and the comb of St Kentigern was long preserved among his relics in the cathedral of Glasgow. But

¹ For instance, at Daviot we have the crescent symbol and under it the mirror and comb; at Upper Manbean the fish and under it the mirror and comb; at Keithhall the double disc and under it the fish, and under that again the mirror and comb; at Aberlemno the serpent, under it the double disc, and under that the mirror and comb; at Bourtie the crescent and under it the double disc, and then the mirror and comb.

as a matter of fact the comb occurs very rarely by itself among these early symbols. It is usually associated with the mirror; and although, when placed by itself, it might have been taken for the symbol of an ecclesiastic, its conjunction with the mirror appears to suggest a different application. So far as light can be cast upon the meaning of the association of these two symbols from historical data, it seems to point to an explanation of the emblems as significant of the female sex. Pope Boniface concludes his letter to Ethelburga, wife of Edwin, King of Northumbria, in A.D. 625, with this announcement:—"Besides, we have sent you the blessing of your protector, the blessed St Peter, Prince of Apostles, that is a mirror of silver and a gilt ivory comb."¹

It is apparently the case in several instances among the monuments of Class II. that when there are human figures associated on the same slab with the symbols of the mirror and comb they appear to be females. And in the cases of the survival of these two symbols on the monuments of the West Highlands, they are certainly used as female emblems.²

The symbols which occur most frequently are four in number—the crescent, the double disc, the mirror and comb, and the beast form with the long jaws and scroll feet. All these occur more than twice as often as any of the others, and they may therefore be regarded as the prevailing symbols, embodying the significance which was universally considered to be most in accordance with the intention of the monumental system. While these principal symbols rarely occur singly they are generally used in combination with one, two, or three others—rarely with more than three; and it is remarkable that many combinations of two symbols, especially when one or both of these are principal symbols, are also found repeated on other monuments, but with the addition of a third symbol—the mirror and comb.³ Thus it would appear that what is told by the first two symbols was told alike of males and females, and that certain groups of symbols were made applicable to females by the addition of the mirror and comb as a female determinative.

The combinations of symbols on one monument are very rarely repeated in the same order on another monument. But there are a few cases in which different

¹ Bede's *Ecclesiastical History*, b. ii. c. 11.

² For instance, on the monumental slab of Anna, prioress of the nunnery at Iona, and on slabs at Kilmory, Kiels, and Tobermory (*Proc. Soc. Ant. Scot.*, xvii. 342).

³ Thus the crescent and the oblong symbol, which appear on the stones at Firth, S. Ronaldsay, Clynekirkton No. 1, and Old Deer, appear on Clynekirkton No. 2 with the addition of the mirror and comb. The crescent and the beast form with the scroll feet, which appear on the stones at Crichtie, Kintore, Logie Elphinstone, and Strathmartine, appear at Fyvie and Rhynie with the addition of the mirror and comb. The crescent and double disc, which appear at Logie Elphinstone, appear at Bourtie with the addition of the mirror and comb. The crescent and triple circle with the bar across, which appear at Lindores, appear at Inveravon with the addition of the mirror and comb. The crescent and arch symbol, which appear on the Thurso stone from Lybster, Reay, appear at Clynemilton with the addition of the mirror and comb. The double disc and the beast form with the scroll feet, which appear at Dyce, appear again at Tullich with the addition of the mirror and comb.

monuments in different places present the same symbols similarly arranged.¹ It is evident from this that, whatever the story was which these similar combinations of symbols had to tell, it was not only a story which was applicable in different places, but it was the same story which was told with reference to different individuals. It is thus clearly indicated that the import of these symbols is not of an exclusively personal or local, but of a general nature.

Three of the principal symbols are found grouped together in one instance in such association with three figure subjects as to suggest that a special relation of each to each was intended to be signified by the association. The reverse of the stone at Dunfallandy (bearing the cross on the obverse) presents a pictorial group of two personages seated with a cross on a pedestal between them, and directly over each figure is placed one of the three symbols. If there is any significance in this grouping of the symbols with the figures, there must be some congruity of relation or significance between the crescent symbol and the cross. The same congruity of relation or significance may be assumed to exist between the figures of the two personages and the symbols placed over them, but in the absence of any definite determination of the significance of these two figures,² it is impossible to carry the conclusion further. The same three symbols are grouped together on the stone at St Madoes, though there is nothing so obviously suggestive in their association here with the three horsemen placed above them. On the stone at Barra the cross is directly superposed upon the crescent symbol, but there is nothing to indicate whether the grouping has a symbolic intention or is merely accidental. Although nothing definite may be extracted from any or all of these apparently suggestive associations, the associations themselves are facts in the study of the symbols which have to be reckoned with.

The crescent and the lily are well-known symbols of the Virgin Mary, but

¹ At Logie the beast form with the scroll feet is placed over the crescent; and the same arrangement is seen at Crichtie.

² The Trinity was represented in early Christian art by two personages with a cross between them. The Transfiguration was also represented by the three figures of Moses, Elias, and a cross between them instead of the transfigured Saviour. In the Dunfallandy group the larger of the two seated figures bears a rod over the right shoulder. The rod, as the symbol of creative power, was sometimes given to the first person of the Trinity, and the rod of Moses was used in the scene of the Transfiguration to distinguish his figure from that of Elias. In the mosaic in the concavity of the apse in S. Appolinaris in classe at Ravenna is a jewelled cross with Moses and Elias on either side certified by their names. In a circle in the centre of the cross is a bust of the Saviour, over the summit IXΘVS, and on either side A and Ω. The mosaics in the dome of the Arian baptistery at Ravenna have the baptism of Christ in the Jordan for a central subject, and round it Christ and the twelve apostles. Each apostle is in a separate compartment, but the principal compartment contains three figures—a cross enthroned in the centre instead of the Saviour between the two apostles Peter and Paul. Didron's *Christian Iconography* (1886), vol. ii. p. 369; Garucci, *Storia dell' Arte Cristiana*, vol. iv. pl. 241.

neither the crescent symbol with the V-shaped rod (No. 124) nor the flower symbol (No. 162) can be distinctly traced to this origin. On the stone (No. 2) from Monifieth the figure of a nimbled (?) female is placed in a compartment of the sculpture next to the compartment containing the crescent symbol, and above it the beast bust, which is here more suggestive of the bust of the ass usually associated with the Nativity.¹ The obverse of the stone bears the usual decorated cross, and the most that can be said is that if the symbols on the reverse were interpreted in the sense thus indicated, there would be nothing incongruous either in the interpretation or the association.

Yet in almost all the cases in which an apparently congruous conclusion is reached from some apparently suggestive association or combination of the symbols, it is immediately found that the proposed explanation does not appear to be applicable in other cases. Thus it becomes evident that none of the conjectural hypotheses suggested by selected examples will stand the test of a general application, and the inevitable conclusion is that no consistent theory of the origin and significance of these geometric symbols can be constructed from the circumstances of their occurrence on the monuments.

But considering that altogether the number of symbol-forms is upwards of forty, and that they are almost all found on the monuments of both Class I. and Class II., it is clear that the period over which their general use extended must have been one of considerable duration. A system of symbolism so extensive and so elaborately constructed can scarcely be supposed to have been invented and practised over a wide area merely for the expression of trivial or commonplace ideas. Its characteristics are those of a carefully designed system of monumental symbolism, which must have embodied some corpus of ideas universally applicable and universally intelligible over the whole area and throughout the whole period in which it was prevalent.

Although none of these symbols are ever associated on the monuments of Class I. with any of the common symbols of the Christian faith, they are used in association with the cross and with other symbols and symbol-pictures familiarly known as Christian on the decorated monuments of Class II. They were therefore plainly capable of expressing or supplementing Christian symbolism, and it is highly probable that the sense in which they appeared on the later monuments was also the sense in which they appeared on the earlier.² If this be so, they could never have been distinctively Pagan. It is difficult, on the one hand, to imagine a system of

¹ See the busts of the ox and ass over the babe as represented on the golden disc of Byzantine date from Konieh—*Memoires de la Soc. des Antiq. de France (Bulletin, 1883)*, vol. xlv, p. 126.

² Speaking of the "sceptre-traversed crescent and the object known as the spectacle ornament," Sir Samuel Ferguson says: "If we apply the rule *noscitur a sociis*, we must infer them to be symbolical and Christian." Ferguson's *Ogham Inscriptions in Ireland, Wales, and Scotland*, p. 153.

Paganism so restricted in its area and yet so productive of symbolism. No known system of Paganism in Europe has exhibited anything like the fertility of symbolic expression which characterises this limited area of Scotland. And, on the other hand, although it is true that in the first ages of the Church in Rome a few of the Pagan pictorial symbols were taken and adapted to Christian significations,¹ it can hardly be supposed that the Christian teachers anywhere could possibly have tolerated the transference of an entire system of heathen symbolism to Christian uses.

So far as these recondite symbols are concerned, there is no break in the continuity of their use as between the unshaped and unhewn monuments of Class I. and the shaped and surface-dressed slabs of Class II. Taking the four symbols that are of most frequent occurrence on the monuments of Class I., we find that they also occur more frequently than the others on those of Class II. But although the old symbolism is thus continued, it is no longer the only kind of symbolism employed, and instead of occupying an exclusive place on the monuments it is relegated to a subordinate position. For the chief characteristic which distinguishes the monuments of Class II. from those of Class I. is that the new style of monument always bears, as its principal device, the distinctively Christian symbol of the cross. The contrast between the sparing use of the symbolic sculpture on the monuments of Class I., consisting of a few incised symbol-forms irregularly placed, usually on one side of the stone only, and the complete filling in of the whole field of both faces of the monuments of Class II. with symbolism and ornament, is very striking. No less so is the remarkable increase in the use of animal symbolism on the monuments of Class II., which frequently present such symbol-pictures as the hunting of the stag, and abound in groups of animals, real and fabulous, placed in such attitudes and relations, that it is clear that they are not in the scene pictorially, but symbolically.

The system of animal symbolism which was such a prevalent feature of the Christian art of the early Middle Ages was derived, for the most part, from an anonymous treatise on the nature of beasts, originally known by the name *Physiologus*,² and later in its adaptation to the system of Christian symbolism as *The Divine Bestiary*. This singular treatise has exerted such a wide-spread influence on the Christian art of Europe, that its traces are found pervading the ecclesiastical manuscripts and sculptures of every country from Iceland to the Mediterranean. The date of its first

¹ Such as Orpheus charming the beasts, and the Good Shepherd—the latter figure being imitated from that of the Hermes Criophorus.

² For information regarding the nature and influence of the Bestiary, the reader may consult Professor Land's article "Physiologus" in the *Encyclopædia Britannica*; the chapter on "Medieval Bestiaries" in Mr Romilly Allen's *Early Christian Symbolism in Great Britain and Ireland* (London, 1887); and an interesting little volume entitled *Animal Symbolism in Ecclesiastical Architecture*, by E. P. Evans (London, 1896), in which a bibliography of the subject is given.

compilation is unknown, but it seems probable that its original source was in Alexandria. It is distinctly specified by its name of *Liber Physiologus* in a decree attributed to Pope Gelasius (A.D. 496) which denounced it as having been written by heretics. But Gregory the Great (A.D. 590–604) makes use of its allegories in his Homilies, and it subsequently became the favourite repertory of Middle Age natural history and a popular treatise of religious allegories. Though translated into many languages,¹ and often expanded and versified, its essential substance remained the same from the fifth to the fifteenth century, when, with the invention of printing and the free dissemination of knowledge, it gradually became obsolete.

But before that time it had profoundly and universally influenced the religious literature and art of the Middle Ages. We see its influence in the commentaries on the Biblical story of the Creation of the Beasts.² It was known to Bede as the treatise *De naturis bestiarum*. Bishop Ethelwold gave a number of books to the monastery of Peterborough³ in the second half of the tenth century, and among them was a *Liber Bestiarum*. Bishop Leofric gave an eleventh-century MS. of it to the cathedral of Exeter, a portion of which is still preserved. An Anglo-Norman MS. from Holm Cultram Abbey in Cumberland is in the British Museum, and a twelfth-century MS. in the cathedral at Lincoln. There must also have been an Irish version, for its influence is seen in the legendary life of St Brendan, and there is an extract relating to the nature of the lion in the *Leabhar Breac*, an Irish MS. of the fourteenth century. These examples show that the Bestiary was known and used in Britain as well as on the Continent, where there are early manuscripts of it in almost all the great libraries.⁴ It still survives in the folklore of almost every country of Europe in the popular traditions of the salamander that lives among flames, of the piety of the pelican that gives its young its blood, and of the rejuvenation of the phoenix from its own ashes. But it also survives in forms that are even more enduring. Its allegories supplied the ecclesiastical artists of the early Middle Ages with an endless variety of subjects for sculpture and painting. We meet with them on fonts, on capitals of pillars, on the sides and arches of doorways, on exterior

¹ "Perhaps no book except the Bible has ever been so widely diffused among so many peoples and for so many centuries as the *Physiologus*. It has been translated into Latin, Ethiopic, Arabic, Armenian, Syriac, Anglo-Saxon, Icelandic, Spanish, Italian, Provençal, and all the principal dialects of the Germanic and Romanic languages." Evans, *Animal Symbolism in Ecclesiastical Architecture*, p. 62.

² A very numerous class of these works, partly commentaries and partly compilations from the Bestiary, was known as Hexæmeron. One of the most famous of these is the Homilies of Basil, entitled *Basilii Magni Homiliæ novem in Hexæmeron*; in the last three of which, devoted to the fish of the sea, the fowls of the air, and the beasts of the earth, he makes frequent use of the Bestiary.

³ *Arch. Jour.*, xx. p. 361.

⁴ See a list of the manuscripts and published texts of the Bestiaries in Mr J. Romilly Allen's *Early Christian Symbolism*, p. 338.

walls, on the frescoes of interior walls, and on the stained glass windows of churches.¹

A very interesting English example of Bestiary sculpture occurs on the church at Alne in Yorkshire.² Nine of the subjects remain, and each had its name carved over it. Among them are the whale, the dragon, and the fox, each of which symbolises the devil. The whale is not seen in the panel carved with its Bestiary name ASPIDO, but a ship only is shown. The account of the whale given in the Bestiary is that it covers its back with sand and, raising itself partially out of the water, remains motionless till the sailors, mistaking it for an island, land upon its back, and then it plunges with them into the depths to their sudden destruction. The whale is explained as meaning the devil, the sands the riches of this world, the ship the body that should be guided by the soul acting as steersman, and the sea is the world. The interesting point in connection with the sculpture here is that all this is symbolised, as it were, in short-hand, by the single figure of a ship with two persons in it. The ship as a symbol³ was not, however, confined to the representations of the Bestiary. From a very early period it was a common and appropriate symbol of Christian art.⁴ Perhaps one of the most

¹ On a sculptured frieze of the cathedral at Strasbourg the scenes from the Bestiary are alternated with scenes from Scripture, so that the symbol-pictures from the Scripture and the symbol-pictures from the Bestiary illustrate each other like types and antitypes of the purer symbolism. The sacrifice of Isaac, a Scripture type of Christ, is associated with a Bestiary type of Christ represented by the eagle compelling its young to gaze upon the sun; and these are succeeded in the frieze by Bestiary symbol-pictures of the lion breathing into the mouth of its dead cub to bring it to life, the hunting of the unicorn, the pelican reviving its young with its blood, and the phoenix rising from its ashes, similarly associated with symbol-pictures from Scripture (Cahier and Martin, *Nouveaux Melanges d'Archéologie*, vol. i. p. 150). On a thirteenth-century stained glass window in the cathedral at Bourges, the central subject—the Resurrection of our Lord—is surrounded by four types of the Resurrection, two of which are from Scripture and two from the Bestiary; viz., the pelican, and the lion breathing into the face of its cub. A window in the cathedral of Le Mans has the Crucifixion similarly surrounded by four types, two from Scripture and two from the Bestiary—the pelican and the lion. In the cathedral at Lyons we have the lion, the eagle, and the caladrius from the Bestiary bracketed with the Scripture subjects of the whale ejecting Jonah, the sacrifice of Isaac, and the brazen serpent. A series of Bestiary subjects surrounds the knob of an enamelled chalice of the fourteenth century in the cathedral at Mayence, comprising the unicorn, the pelican, the phoenix, and the lion breathing on its young, arranged alternately with the symbols of the four evangelists. *Jahrbucher des Vereins von Alterthumsfreunde* (Bonn), Heft 87, p. 100.

² Described in Mr Romilly Allen's *Early Christian Symbolism*, p. 347.

³ This symbol, which is very common on the later crosses and recumbent slabs of the West Highlands, is often used, on the slabs at least, in a heraldic sense, though not borne heraldically upon a shield. Symbols and emblems that were originally used only in a religious sense were not unfrequently adopted as heraldic bearings. Thus Jonah being disgorged by the whale, or "bellua marina," which forms the charge on the shield of the Visconti, Lords and Dukes of Milan in the fourteenth and fifteenth centuries, came into the heraldry of Scotland through Catherine de Balsac, first Duchess of Lennox, who traced her descent from the Visconti. Nisbet's *Heraldry* (ed. 1718), p. 196.

⁴ Clement of Alexandria, enumerating the symbols of the faith used by the early Christians, mentions the anchor and the ship in full sail.

interesting examples of its use is on a sarcophagus at Spoleto on which the symbolic ship is rowed by the four evangelists with the Saviour sitting at the helm, the names being carved under each of the figures. The ship is also used as part of the picture-symbols of Jonah and the Whale, and as the Ark of Noah in the symbolic picture of the Deliverance of Noah and his family from the Deluge. A ship or boat with six figures in it occurs on the monument at Cossins, but there is nothing to indicate the sense in which it is to be taken beyond the fact that it is one of a series of conventional symbols on a Christian monument.

As we find these Bestiary subjects intermingled with Scripture subjects in ecclesiastical sculpture of the twelfth century and earlier both in Britain and on the Continent,¹ it is obvious that, as the Bestiary was known and used in the religious literature and art of the preceding centuries, it must also have been used in the ecclesiastical sculpture, if such sculpture existed in this country, as we know that it existed on the Continent. There is indeed one Scottish example of such architectural decoration in the chancel arch or round-headed doorway cut out of a single stone from an early church at Forteviot. It has for a centre piece the cross on a pedestal or mount with the four rivers, with the Agnus Dei on the right, and figures possibly of King Hmgus and his three sons as founder and benefactors of the church. But we have so very few architectural remains of early churches that our knowledge of the sculptured symbolism is confined to monumental sculpture which, though not strictly ecclesiastical, is closely akin to ecclesiastical sculpture in its intention of presenting to popular view familiar symbols of Christian doctrine.

The influence of the Bestiary system of symbolism is clearly recognised on the monuments of Class II. in the prevalence of the symbolic beasts² placed in association with Scripture scenes and with the principal symbol of the cross. We even recognise it in the characteristic traits and attitudes and associations of the beasts portrayed in the sculptures. When we know the teaching of the Bestiary with regard to the stag—that it is the enemy of the serpent, which it pursues and kills by trampling with its feet, and that for this reason the stag is a symbol of Christ—we can understand why a stag treading on a serpent is represented immediately under the right arm of the cross on the monument of Armbiorg at Kirk Andreas, in Man,³ and why the same subject appears in the same position on another monument to Thuraltr at the same place,

¹ On the tenth-century ambo of the church of San Ambrogio at Milan there is a series of Bestiary subjects certified by their names carved underneath.

² The ambones of SS. Agnellus and Deodatus at Ravenna, both of sixth century, are ornamented with symbolic beasts arranged in rows, each being in a separate panel. The animals thus used are mostly the lamb, stag, peacock, goose, dove, and fish. Among the animals on the ambo of Deodatus are two human figures with outspread arms in the ancient attitude of prayer.

³ Allen's *Early Christian Symbolism*, p. 377; Kermodé's *Catalogue of Manx Crosses*, p. 33; *Proc. Soc. Ant. Scot.*, vol. xxiii. p. 337.

but with this variation, that the serpent is trampled on by Christ himself represented as a human figure, bearing the cross of the resurrection in his left hand and the Book of the Gospels in his right hand,¹ while to give emphasis to the identification of this human figure as that of the Saviour, the symbolic fish is placed immediately in front. So also we can understand why the spaces on both sides of the cross on the monuments of Class II. are so frequently filled with beasts, all of which we might be able to interpret by their appropriate symbolism through the medium of the Bestiary if it were possible to determine the separate individuality of each. But unfortunately the artists who carved the monuments were not careful—like those who carved the ecclesiastical sculptures—to name their beasts, and as the descriptions and even the drawings of the MSS. of the Bestiary are generally very unlike the real animals, and as moreover a large proportion of the animals described are purely fabulous, the difficulty of determining what particular animal is meant by an unnamed representation becomes extreme. The animals with which the sculptor himself was familiar are in general faithfully and even spiritedly rendered, and are readily recognisable; but for the determination of the individuality of others with whose forms and characteristics he was unfamiliar, we are dependent upon certain pronounced features or attitudes more or less fancifully portrayed. But we have no difficulty in recognising the lion breathing on the face of its young to bring them to life, which is the Bestiary symbol of the resurrection,² on the monuments at Shandwick, Dunfallandy, and Govan, or the eagle eating the fish³ on the St Vigean's monument, which, the Bestiary informs us, is the symbol of the man of pure and holy life feeding on the son of God. But in the cases of beasts which are represented with no features of character or attitude or association of circumstances to supply a clue to some such special reference in the text of the Bestiary it is much more difficult to find satisfactory identifications. Perhaps the hyena may be recognised in the figures of two bear-like animals on the recumbent

¹ Christ, with a cross in one hand and a book in the other, is the central figure in the mosaic in the apse of the church of San Michele at Ravenna, attributed to the sixth century. In the representation of Christ in Glory in a miniature of an Irish manuscript of the Gospels at St Gall, and also in the sculpture on the tympanum of a doorway at Ely cathedral, the Saviour is represented as holding a cross and book. Allen's *Early Christian Symbolism*, pp. 172, 262.

² A curious proof of the general acceptance of this legend of the Bestiary is supplied by one of the romances of the Charlemagne cycle. In the *Historia de Vita Caroli Magni et Rolandi* ascribed to Archbishop Turpin and written before A.D. 1122, the author represents Roland as endeavouring to explain to the heathen Ferracute the truth of the resurrection of Christ and the general doctrine of the resurrection as follows:—"Take the mystic example of the lion who on the third day by licking his dead cubs revivifies them with his breath." A good example of the lion breathing in the face of its young is placed with the symbol-picture of Adam and Eve and the serpent at the tree of knowledge—types of the fall and the resurrection—on a font at Bolum in West Gothland. Bernhard Salin, *Djur och Vartmotivens utvecklings Historia*.

³ In the Book of Armagh the eagle symbol of St John is thus represented. *National MSS. of Ireland*, vol. i. pl. 28.

monument at Meigle, which are represented in the act of devouring fragments of dead bodies, and probably also in the two beasts each with a human leg hanging out of its mouth¹ on the monuments at Inehimman and Newton Woods. It is no objection to this identification that the beasts are not like the hyena, because the French prose Bestiary expressly informs us that the hyena is like the bear in everything but colour, and that it feeds on dead bodies. But when we find that the crocodile of the Bestiary is represented as a scaleless quadruped with no reptilian features, and the tiger as having wings and a tail like a dragon,² we are in a position to realise the impossibility of determining the individuality of the creatures for which the representations are meant, by the analogies of natural history. Having no Celtic manuscript of the Bestiary, we are unaware of the nature of the variants of its representations and applications which the Celtic copyists were certain to have made, as the Anglo-Saxon and Norman copyists did, and therefore we must be content with the general conclusion that the presence of the beasts upon the monuments is due to the influence of its spiritual allegories, and with the knowledge that in accepting this conclusion we merely accept as true for the monumental art of this country what was true of the ecclesiastical art of all the other countries of Christendom.

And this applies no less to the representations of actual beasts than to those of the fabulous beasts, such as the centaur, the unicorn, the manticora, the basilisk, the dragon, the siren, and the griffin, which are all, with many others, described in the Bestiary and spiritualised in the same manner as the actual beasts. The centaur, which appears on the monuments at Meigle, at Glammis, and at Aberlemno, is also found on the bases of the high crosses of Monasterboice and Kells in Ireland, and is not unfrequently represented on the sculptured tympana of Norman churches in England.³ And when the Bestiary informs us that the centaur being the man-animal represents the warfare waged in the Christian life between the spirit and the flesh, we see how it is that it becomes an appropriate pictorial symbol placed beside the cross on churches and on monuments.

In the church of Souvigny in France there is a series of Bestiary sculptures of the

¹ This motive, however, is a very ancient one, occurring in the decoration of the bronze *stipule* of the pre-Gaulish period of the Iron Age of North Italy, &c. Montelius, *La Civilisation primitive en Italie*, pl. 55, 105. The processions of nondescript animals on these vessels have a singular suggestiveness of ancestral relationship to some of the sculptures on the Scottish stones.

² Such a winged dragonesque creature is placed among other nondescript animal forms in the space between the cross-shaft and the margin of the stone at St Vigean's.

³ Over the west doorway of the church of Ault Hucknall in Derbyshire is a centaur with a nimbus round the head, holding a branch in its right hand and a cross in its left. On the tympanum of the door of the church at Salford in Oxfordshire is an equal-armed cross within a circle, having on its right a centaur armed with sword and shield and on its left a lion with floriated tail. In these instances it is clear that it is not the classical centaur but the ono-centaur of the Bestiary which is fitly associated with the most sacred and significant symbol of the Christian faith over the entrance to the church.

Romanesque period,¹ the animals being arranged in separate panels and named, so that there is no room for conjecture as to their identification. The unicorn is there, as described in the Bestiary, with a body like that of a horse and a head like that of a stag, and its single horn—not straight as in modern representations, but curved backwards. This enables us to recognise the animal with the single horn curving backwards on the monument at St Vigean's as the unicorn of the Bestiary.

Another animal of the Souvigny series is the manticora, represented as a tall quadruped with a human head and face on a long vertical neck. It is described as having the face of a man and the body of a lion and as delighting in human flesh, while its name is explained as signifying the man-eater. From these characteristics there can be little difficulty in recognising the group of the human-headed beast and the human figure fleeing from it with gestures of alarm on the recumbent monument at Meigle, and the slab at Murthly, as the manticora and its victim.

The dragon and the griffin and the siren or mermaid, in the forms in which we are most familiar with them, belong mostly to a later development of monumental sculpture, although a winged and four-footed dragon-like creature occurs at St Vigean's and griffin-like animals at Kettins and Meigle. The dragonesque and other non-descript creatures portrayed in these sculptures are often represented with features common to the miniatures of the early manuscripts of the Bestiaries, and to the ecclesiastical sculptures of even a considerably later period during which the traditional symbolism survived.²

One of the most frequent, and certainly the most spirited and picturesque, subjects on the monuments of Class II. is the stag-hunt. It is presented with many variations of detail yet with a singular fixity of treatment. The chase has been a favourite Christian symbol from a very early period,³ and was used alike in early Christian literature and art. It occurs on the sculptured sarcophagi and the gilded glass vessels

¹ De Caumont, *Abécédaire d'Archéologie, Architecture Religieuse* (1870), p. 274.

² For instance the tails ending in serpents' heads, a feature explained by the passage in the Apocalypse: "Their power is in their tails, for their tails were like unto serpents and had heads wherewith they do hurt" (Rev., ix. 19). The same feature is alluded to by St Bernard in his denunciation of the extravagances of the ecclesiastical sculpture of his time: "What do here these unnatural apes, these fierce lions and tigers, and monstrous centaurs, semi-human creatures, warriors engaged in combat, and hunters sounding their horns? Here you behold a quadruped with a serpent for a tail and there a fish with a quadruped's head," &c. A curious instance of the survival of this feature occurs in many of the earlier representations of St Michael and the dragon and may be seen in the thirteenth-century effigy of an ap Howel in the church at Wrexham, where he is represented as trampling on and slaying a dragon with serpent-headed tail. *Archæologia Cambrensis*, vol. ix. (fifth series) p. 277.

³ On a silver plaque ascribed to the end of the fourth century which formed part of the decoration of the coffin of St Paulinus preserved at Treves, there is a hunting scene, placed under the representations of the Fall and the Raising of Lazarus, in the style of the Catacombs. Kraus, *Christlichen Inschriften*, p. 98; *Jour. Brit. Arch. Ass.* (new series), vol. ii., 1896, p. 282.

of the Catacombs and appears not unfrequently on ecclesiastical sculptures and mosaics. At the church of San Zenone in Verona the west doorway is ornamented by a series of sculptured panels let into the wall on either side, the one set consisting of scenes from the New Testament and the other of scenes from the Old Testament. The New Testament scenes are a series from the life of the Saviour ending with the Crucifixion. The Old Testament scenes begin in Paradise with Adam naming the beasts, the Creation of Eve, the Temptation by the Serpent, the Expulsion from Paradise, and the results of the fall, Adam delving and Eve spinning and nursing two babes. But the interesting feature of the series is that the lower panel on either side has a subject which is not Scriptural, but which must have had a symbolic import as intelligible to the beholders as that of the Scriptural panels with which it is associated. The New Testament series of subjects is supplemented in the lower panel by a combat between two armed men fighting on horseback and two fighting on foot. The Old Testament series is also supplemented in the lower panel by a very spirited representation of a stag-hunt—a stag chased by three hounds, one of which fastens on its flank, while behind them is the pursuing horseman blowing a hunting horn.¹ Whatever may have been the variations of the sense in which this symbol-picture was taken² throughout the long period in which it was used, there can be no doubt, from its association here with such a series of Scriptural scenes on the side of a church doorway, that it was a commonly accepted symbol-picture involving some generally understood lesson of Christian doctrine.

The transition from the symbolism of Class II. to that of Class III. is marked by the disuse of the recondite symbols and the prevalence of pictorial symbols of Scripture

¹ There is also a spirited stag-hunt carved on the right side of the doorway of the church of San Ambrogio at Milan.

² It has been suggested that the frequent occurrence of this picture-symbol on the monuments, especially on those of later date throughout the West Highlands, has reference merely to the circumstance that the person so commemorated was fond of hunting or was regarded by his contemporaries as "a mighty hunter." This explanation obviously cannot fit such a case as that of the cross at Kirkcubbin, Tiree, on which, while the obverse of the cross-head shows the crucifixion with John and Mary on either side, the reverse shows a spirited stag-hunt and the stag brought to bay by five hounds. Stag hunts also occur on the arm of the Killamery cross, and on the bases of the north cross, Clonmacnoise, and the cross in the churchyard at Kells. Dr F. X. Kraus has described an embroidered cope of the fifteenth century on which is represented an archbishop with his cross in his right hand, blowing a horn, and holding three dogs in leash by which he is driving a hind towards a nimbed female seated in the background. The three dogs are labelled respectively CARITAS, VERITAS, and HUMILITAS. The hind is the symbol of the soul, which is thus driven to find shelter in the Church typified by the nimbed female figure. In the twelfth-century manuscript of the *Hortus Deliciarum* the significance of the symbol of the chase is thus explained:—"The chase of the Christian is the conversion of sinners. These are represented by hares, by goats, by wild boars, or by stags. These beasts we smite with darts by our example of continence, humility, voluntary poverty, and perfect charity; we pursue them with dogs when we arouse their fears by the preaching of the word."

subjects. Taking in the first place, those as to which there can be no manner of doubt, we find on the Ruthwell cross the following representations of scenes from Scripture, each of which is certified by its accompanying inscription, viz. :—The Annunciation ; the Salutation of the Virgin ; the Flight into Egypt ; St John and the Agnus Dei ; the Healing of the Blind ; Mary Magdalene anointing the feet of Christ ; and the Crucifixion. We find the figures of the Virgin and Child on a fragment of a cross-slab at Brechin also certified by an accompanying inscription. The figures are very rude, but they are enclosed in a circular space in the centre of the cross with an ornamental border, which at a later date would have been a vesica. It is supported by angels at either side, the dove, as the symbol of the Holy Spirit, appears above it, and below are the symbols of St John and St Mark.¹ The same subject of the Virgin and Child, but with different accessories, appears on the cross-slab at Crail, on the cross at Kildalton in Islay, on St Martin's cross, on another broken cross at Iona, and on the cross at Canna.

There are but two examples of the Temptation of our First Parents in the Garden by the Serpent on the Scottish monuments, but it is more common on the high crosses of Ireland. Of all the pictorial symbols this is perhaps the one which has the greatest range in time. It is found on the frescoes and sculptures and on the gilded glass vessels of the Catacombs, on the ecclesiastical sculptures of churches, on fonts, and even on Scottish monuments of the last century in country churchyards.² From the earliest times it has varied but little in the general form of expression, though there is considerable variation in the details. One example is on a broken cross-shaft at Iona. The same subject, treated in a similar manner, appears on the capital of one of the pillars in the cathedral there. The other example is on a cross-slab at Farnell in Forfarshire. Here it is placed immediately under the cross. Adam and Eve stand in the usual manner on either side of the tree, but are both clothed in garments reaching to the feet. Eve holds an apple in her right hand. There is no serpent on the tree, but on either side of the group there is a serpent—thus duplicated apparently for reasons of artistic symmetry.

The crucifixion occurs but rarely on the Scottish monuments with Celtic ornamentation, though it is a general feature of the high crosses of Ireland, and common on the later crosses of the West Highlands. It is a remarkable fact that the symbolism of the monuments of Class II., which always includes the cross itself either in a decorated or glorified form, never includes the crucifixion,³ which only appears on a

¹ The symbols of the other two evangelists were probably present on the missing portion of the stone.

² As at Logierait, Little Dunkeld, Falkirk, and Uphall.

³ There are no known representations of the crucified figure sculptured in relief before the ninth century except two, the crucifix of Sirolo and the Santo Volto of Lucca. In all other representations of the crucifixion earlier than ninth century the figure of the Saviour is painted, engraved, or enamelled on the cross.

few of the later monuments of Class III. It appears in a very rude form on the cross slab at Kirkholm in Wigtownshire, on a broken cross-shaft at Monifieth, with John and Mary at either side, and on the cross at Camuston near Monikie in Forfarshire, with the spear and sponge-bearers at either side. It appears with two soldiers on a fragment at Strathmartine in Forfarshire and with two soldiers and the three Maries underneath on a fragment of a cross shaft from Abernethy.

Occasionally some of the accessories of the crucifixion appear beside the cross on the cross-slabs, though the crucified figure is absent. Angels appear in the spaces over the arms of the cross at Kirriemuir, Eassie, and Benvie, and under the arms with their heads bowed as if in sorrow at Aberlemno. From the ninth century the sun and moon usually accompanied the representations of the crucifixion, the sun being placed on the right and the moon on the left over the arms of the cross. Occasionally they are personified, and the names Sol and Luna written over them. It is scarcely possible to identify any of the figures placed over the arms of the crosses on the Scottish monuments as intended for Sol and Luna, but on the lower panel of the Ruthwell cross and at Craignarget in Wigtownshire the sun and moon appear as two orbs over the arms of the cross.

The Irish high crosses, which usually have the crucifixion on one face, have generally a representation of Christ in glory on the opposite face. There is only one instance of this in Scotland, on the cross at Camuston in Monikie, which bears on the face opposite to the crucifixion the figure of Christ in glory, holding the Book of Remembrance in the left hand and having the right hand uplifted in the act of benediction, while two figures bend reverently on either side.

On the shaft of the same cross are four figures in long robes each with a book held in the right hand against his breast, which are apparently intended for the four evangelists. On the slab at Elgin there are four figures with books in the four quadrants of the cross and two are identifiable by their accompanying symbols¹ as Matthew with his angel and John with his eagle. The eagle of St John, the lion of St Mark and two figures with books are also in the quadrants of the cross at Brechin, which has the Virgin and Child in the centre.

The figure on the monument at Inchbrayock girt with a sword, but threatening

¹ The evangelists were originally represented as personages bearing books or rolls, but in the fifth century the four creatures of the Apocalypse were adopted as their symbols, the man like figure being assigned to St Matthew because his gospel commences with the human genealogy of Christ, the lion to St Mark as testifying to His royal dignity, the ox to St Luke as showing His priesthood and sacrifice, and the eagle to St John as contemplating His divine nature. In the baptistery of Callistus at Cividale in Friuli these figures are sculptured each bearing a book on which is a line from the verses by Sedulius :—

Hoc Mattheus agens hominem generaliter implens
 More volans Aquilæ verbum petit astra Johannes
 Marcus ut alta fremens vox per deserta Leouis
 Jura sacerdotis Lucas tenet ore Juvenci.

another figure with an object which resembles a jawbone, while a third figure lies prostrate behind him, can scarcely be anything but Samson smiting the Philistines with the jawbone of an ass.¹ Another subject representing Samson tearing the Jaws of the Lion was a favourite pictorial symbol in the early Middle Ages, but it was more frequently David's victory over the lion that was thus used in monumental sculpture, because in David's case the delivery of the sheep from the lion symbolised the salvation of the soul by the victory of Christ over the Devil. A fine representation of this scene occurs on the sculptured sarcophagus at St Andrews, and others on the cross-slabs at Nigg and Aldbar and on a fragment at Drainie.² That it is David, and not Samson, is indicated at Nigg and Aldbar by a harp placed beside the figures and a sheep in the background. The harper playing the harp at the foot of the cross-shafts at Monifieth and Dupplin seems also intended for David, who was the most important of the Old Testament types of Christ.

But the pictorial symbols which most naturally and appropriately find a place among these monumental sculptures are the Scripture scenes which were regarded by the early Christian Church as types of the resurrection. In the pictorial symbolism of the monumental sculpture of the Catacombs there were four subjects that were pre-eminently so regarded—the Raising of Lazarus, the Ascension of Elijah, the Deliverance of Daniel from the Lions, and the Deliverance of Jonah from the Belly of the Whale, and we find all these subjects represented on the Scottish monuments.

The essential elements of the symbol-picture of the Raising of Lazarus, as they are presented in the monumental sculpture of the Catacombs, were the figure of the Saviour standing with hand outstretched towards another figure enclosed within an oblong border or frame for a tomb. Such a group appears on a cross-shaft at St Andrews.

The Ascension of Elijah was represented in the Catacombs by the figure of a man in a chariot with two or four horses, and sometimes Elisha is behind catching the prophet's mantle, and the bears tearing the children appear in the corner. A slab which perished in the conflagration of the church at Meigle in 1869, in consequence of its having been built into the fabric, showed two figures in a chariot, and in a corner below the bear tearing the children. The scene had other accessories, such as a man with a bow kneeling and shooting towards the bear, and dogs accompanying him, but it was a common custom thus to fill the vacant spaces of a symbol-picture

The group representing the Deliverance of Daniel in the Lion's Den in the monu-

¹ In the homilies of Ælfric the Saxon, however, there is a reference to an ecclesiastical tradition that Cain slew Abel with the jawbone of an ass. See *Cursor Mundi*, l. 1071.

² The subject of David and the Lion appears on the cloister doorway of Jedburgh Abbey, and carved in wood on a door dated 1600, now in the Museum. Mr Allen thinks the Drainie fragment is also of late date.

mental sculpture of the Catacombs always shows him standing with outstretched arms, that is, in the ancient attitude of prayer, between two, four, or six lions. That this figure standing in this attitude among lions is Daniel, is certified by the inscription under the representation on a glass vessel of the fifth century from Podgoritza in Albania,¹ which gives a number of these Scripture scenes, and also on the belt-clasps of bronze found in the graves of early Christian cemeteries in Burgundy and Switzerland.² They present a variation from the customary form of the scene in the Catacombs, inasmuch as they show two lions with open mouths placed close to the feet of a human figure standing with upraised arms. This variation is accounted for by the inscription round the border of the clasp, DANINIL DVO LEONES PEDES EJVS LENGEBANT—Daniel, two lions licked his feet. On others of these clasps the lions are shown standing up against the human figure one on each side, their tails at his feet, one paw at his shoulder and the other at his side. This is the manner in which the group of a man and two lions is represented on St Martin's Cross at Iona, and on the cross at Kiels. On the cross-slab at Meigle the subject is in the style of the Catacombs, the number of lions is four,³ and the man has his arms outspread in the ancient attitude of prayer. At St Vigean's there are but two lions and the man is seated between them with his hands upraised. At Inchinnan and Barrochan the human figure is reduced to a mere bust.⁴

Perhaps the most common subject in the monumental sculpture of the Catacombs from the fourth to the seventh century was the story of the prophet Jonah, usually represented in three scenes,—the swallowing, the disgorging, and the repose under the gourd. In course of time, and in different circumstances, the treatment of these scenes became so conventional that each was reduced to the merest elements of a symbol-picture. Thus even in the Catacombs the ship is shown as a small dug-out canoe with two men in it, one of whom is thrusting the other over the side head foremost into the open jaws of the sea-monster. In other cases in which the abbreviation has gone further there is no ship, and consequently no second human figure—merely the whale with the man half-swallowed or half-disgorged, as represented either by a pair of human legs or by a man's head and shoulders protruding from its jaws. This is the form in which it appears on the Scottish monuments, but the beast with the man half-swallowed is so totally unlike anything with which we are familiar, that the form in which it appears requires to be certified as that of the whale. This certification is

¹ Figured in the *Bull. de la Soc. des Antiquaires de France*, 1873, p. 71, and in *Revue Archæologique* for 1879, pl. 24, and *Scotland in Early Christian Times* (second series), p. 146.

² *Mittheilungen der Antiquarischen Gesellschaft in Zurich*, vol. ii. pl. 3; *Scotland in Early Christian Times* (second series), p. 147.

³ The number of the lions varies. On the Moone Abbey Cross it is seven, in accordance with the reading of the Vulgate: "in the den were seven lions."

⁴ As the figure of the Virgin and Child is reduced on the Franks ivory casket (*Allen's Early Christian Symbolism*, p. 199).

again supplied by the glass vessel of the fifth century from Podgoritzza, which gives all the three scenes and underneath the words *DIVNAN DE VENTRE QVETI LIBER-ATVS EST*. The whale here is the same as the monstrous beast which is always found in the same scenes in the Catacomb sculptures—a beast with long jaws, having two fore-feet but no hinder limbs, and the body terminating in long snaky convolutions and a fish-like tail. But in a miniature in the Vatican Codex the artist, while retaining all the features of the beast except the snaky convolutions, gives hind-legs as well as fore-legs to the whale and thus converts it into a quadruped. It is as the two-legged monster answering in every point to the whale of the Catacombs that it appears in the swallowing scene on the right side of the shaft of the cross on the cross-slab at Dunfallandy, while on that from Woodwray (and now at Abbotsford) it is a quadruped like the whale of the Vatican, which has the human figure half-swallowed.

Another variation of this symbol-picture is seen in the cases in which the two scenes of the swallowing and the disgorging are conjoined in a single representation, as in the baptistery at Ravenna,¹ where the abbreviated picture takes the form of two sea-monsters, erect, with one human figure extended between them so that the one monster has in its mouth the head and the other the feet of the figure. In the earlier representations the scenes were kept apart, and the swallowing was invariably shown by the head and shoulders of the man being invisible as already engulfed and the legs and feet only protruding from the monster's jaws, while the disgorging was invariably shown by the legs and feet of the man being invisible and the head and shoulders rising from within its jaws. But when the two scenes were conjoined into a single abbreviated representation of both actions, there was only one human figure seen extended between the mouths of the two monsters. This is precisely the arrangement of the two monsters with a human figure between them on the upper part of the obverse of the slab at Bressay. On the slab at Dunfallandy, the bodies of two monsters are drawn out so as to form an edging to the whole length of the face of the stone, and their fish-like tails appear in convolutions at the base, while the representation is still further abbreviated by the human figure between their jaws being represented only by a head.²

A group representing a nude figure of a man kneeling before the figure of a bovine animal placed on a pedestal occurs at St Vigean's. The man has a rod in his hand, and what appears to be a scroll proceeds from his mouth. A similar group of a man kneeling before a cow or calf placed on a pedestal occurs in one of the arches of the

¹ Garrucci, *Storia dell' Arte Christiana*, pl. 406, fig. 5.

² Probably the two monsters opposing their mouths and fore-paws in the apex of the slab at Cossins may have had a human figure extended between them as at Bressay, but it is impossible to draw a hard and fast line of distinction between what may be symbolism and what may be merely ornamental design, into which the motive of two monsters so placed appears to pass as shown in the stones at Farnell and Monifieth, &c.

arcade at Ardmore,¹ associated with such Scripture scenes as the Temptation of our First Parents, the three Magi, and the Judgment of Solomon. It seems not impossible that the symbol-picture here may be intended to represent the Scripture incident of the golden calf. This scene from the Old Testament is not one of the common representations in the earlier cycles of Christian symbolism, but it is given in the Bestiary of the National Library, Paris, as one of the antitypes in connection with the hyena,² and on the ivory casket at Brescia the golden calf is symbolised by an ox-bust placed upon a pedestal.³

The subject of the Magi may be included as Scriptural, although traditional elements entered largely into its treatment. The earlier representations on the frescoes and sculptured sarcophagi of the Catacombs only show the scene of the adoration—the three personages presenting gifts to the child Jesus. The representations of the Magi on their pilgrimage mostly belong to a later period. On a rune-inscribed monument⁴ at Dynna, in the parish of Gran and district of Hadeland, Norway, there is a representation plainly intended for the Magi on their journey. The stone is long and narrow, and shows on the upper part three horsemen, and over them a star and the half-figure of a nimbed personage with outstretched arms, apparently meant for the angel. On the lower part of the stone is a scene which has been identified as a rendering of the Sigurd myth, a subject found occasionally on monuments of the Christian time in Scandinavia, and in Cumberland, Lancashire, and the Isle of Man. The group of three horsemen which appears on the Scottish monuments is not, however, in any ease identified by a star placed above them, as on the Norwegian stone.⁵ Other groups of horsemen, whether more or fewer in number than three, when represented as armed with spears and accompanied by dogs, belong to the cycle of hunting subjects previously referred to. But the varying number of the group of horsemen would not by itself be sufficient to negative the supposition that they might represent the Magi, because, like the number of the lions represented with Daniel, the number of the Magi

¹ Miss Stokes, *Early Christian Art in Ireland*, p. 138.

² Cahier and Martin, *Mélanges d'Archeologie*, vol. ii. pl. 31.

³ Garrucci, *Storia dell'Arte Christiana*, vol. vi. pl. 442.

⁴ The inscription, which is in late Scandinavian runes, records that Gunnvor made a bridge in memory of her daughter Astrid. The stone is figured in the *Aarsberetning for 1854* of the *Foreningen til Norske Fortidsmindesmerkers Bevaring*, pl. 1, and described in Nicolaysen's *Norske Fornlevninger*, p. 127.

⁵ The star, as an accessory of the symbol-picture, appears in the Catacombs, and continues till quite a late date. On a fourteenth-century font at Tingstad in Sweden, three out of six New Testament scenes with which it is sculptured are:—(1) The three Magi asleep in one bed, the star above, and the angel appearing; (2) the Magi on horseback, the star above the foremost, a cross above the second; (3) the Magi offering gifts, the star above—*Antiq. Tids. for Sverige*, 1869, p. 93. The three Magi on horseback are on the right side of the tympanum of the doorway of the twelfth-century porch of the cathedral at Verona. They are shown riding abreast, each slightly in advance of the other, as the horsemen occasionally appear on the Scottish monuments.

was subject to artistic and traditional variation. One Celtic tradition makes their number seven.¹ It also describes them as riding on fleet horses and wearing peaked hoods² like the horsemen on the stones.

Of the subjects that are not Scriptural or that cannot be identified as scenes from Scripture there is only one that is free from conjectural identification, being certified by an inscription carved underneath it. In one of the panels on the Ruthwell cross there are the figures of two ecclesiastics standing face to face and each having hold of a disc, which is explained as representing a loaf which they are breaking between them. The inscription reads *SCS PAVLVS ET ANTONIVS FREGERVNT PANEM IN DESERTO*, the reference being to the incident in the legendary life of St Anthony, when he visited Paul the Hermit and partook with him of the loaf brought to them by the raven.³

The same subject of two ecclesiastics with a disc between them appears on the Irish crosses with considerable variation of the details.⁴ The two figures are shown standing, or seated in chairs; the action of breaking the loaf is represented by both having hold of it, or there is no breaking shown and the disc is held in the beak of a bird descending between the two figures. On the Ruthwell cross and on some of the Irish crosses the figures are recognisable as ecclesiastics only by their robes, but on others they carry crosiers. On the Scottish slabs the details are also varied. At Kirriemuir (No. 1) the group is the same as on the Ruthwell cross, two ecclesiastics standing and holding a disc between them, the bird being absent. At St Vigean's (No. 7) the two ecclesiastics are seated on chairs as on the Irish crosses, the bird being absent as at Ruthwell. In the apex of the slab at Nigg the subject is presented in greater detail. The two ecclesiastics do not carry crosiers as on the Irish crosses,

¹ In the Stories of the Gospels in the *Leabhar Breac* the Magi are described as dressed like kings or chieftains in wide tunics, mantles, and long, reddish hoods, and gapped shoes:—"And we were on fleet horses," said the Magi to Joseph. "This is what James of the Knees says in his gospel of the Children, 'seven are the number of the Magi.'"

² Such hoods or cowls were worn both by ecclesiastics and laymen. In the *Life of St Columba* in the Book of Lismore we are told that Columcille sained or blessed a cowl for the warrior Aedh Slaine, with the word that he should not be slain so long as that cowl should be on him. And in Adamnan's *Life of St Columba* is the story of Findlugan donning the saint's cowl to protect him from the spear thrusts of Manusdextera.

³ "While they talked there came a raven which alighted on the tree, and then after a little space flew away and returned carrying in his beak a small loaf and let it fall between them; then Paul, lifting up his eyes, blessed the goodness of God and said, 'For sixty years, every day, hath this raven brought me half a loaf; but because thou art come, my brother, lo! the portion is doubled and we are fed as Elijah is fed in the wilderness.' Then there arose between these two holy men a contention which of the two should break the bread; at last they both took hold of the loaf and broke it between them." Mrs Jameson's *Sacred and Legendary Art*, vol. ii. p. 747.

⁴ On the cross in the street, Kells; on the cross of St Patrick and St Columba, Kells; on the south-east cross, Monasterboice; on the Moone Abbey cross; on the cross at Castle Dermot; and on the cross at Ardboe.

but they hold open books as in the act of celebrating, their bent position being due to the shape of the space in which the sculptor had to place them. The tree referred to in the legend as growing in front of the hermit's cave is there, but duplicated for symmetry and the branches artistically interlaced. The bird descends between the two personages as on the Irish crosses, with the circular loaf in its beak, while, to give emphasis to the identification of the legend by its accessories, St Anthony's tau-cross is placed in the centre,¹ and on either side of it crouch the two lions that came to assist him in the burial of St Paul.² It is not difficult to account for the special veneration of St Paul the first hermit and St Anthony the father of monasticism, in the Scottish and Irish Churches, in whose constitution the eremitical and monastic modes of ecclesiastical life were so closely interwoven.

IV.—THE ART CHARACTERISTICS OF THE MONUMENTS.

In dealing with the art characteristics of different classes of monuments, we have to take into account the form of the monument itself, for the advance of artistic character is evinced as clearly in the refinement of the general form as in the increasing beauty and variety of the decorative designs. Perhaps the most striking feature of the monuments of Class I. is, that they are of the most primitive character, being mere naturally shaped blocks, without regular outlines or constancy of form. Art had not yet brought its rules to bear on the general form of the stone that was to receive the carving, and the necessity of a superficial dressing to prepare a fit background for the figures was not insisted on. These primitive monuments, therefore, exhibit few features that can be dealt with as art in the proper sense of the term.

The symbols carved upon the monuments of Class I. are conventional figures merely incised in outline. The forms are persistent in their individuality of outline, but there are variations in the methods of filling the interior spaces which seem to be governed by decorative principles. For instance, the double disc symbol is in some cases in plain outline, in other cases each of the discs has its interior space relieved by a smaller circle, usually concentric with, but sometimes eccentric to the exterior circle. The crescent is in some cases in plain outline, in other cases its blank spaces are relieved by incurving lines, or by curves and dots, or symmetrical arrangements of groups of parallel curved lines filling some of the curved spaces in corresponding

¹ This was the early form of the cross in Egypt. It appears in a similar position in the scene on the end of one of the arms of the Ardboe cross. O'Neill's *Irish Crosses*, pl. 34.

² St Anthony had no strength to dig a grave, but behold two lions came, and, when they saw the body and St Anthony weeping, they began to dig in the sand with their paws and in a short time they had dug a grave. Then Anthony took the body and, having wrapped it in a cloak, laid it reverently in the grave which the lions had dug.—*Sacred and Legendary Art*, vol. ii. p. 748.

segments of the figure, while, to give effect to the spaces so filled, the other spaces are left plain. In the forms of the curves which are often elliptical, in their disposition, in the insertion of the central dot within the space enclosed by the curves, and in the general feeling of the alternate arrangement of the decorated with the undecorated spaces there is a reminiscence of a much older style of decoration which was characteristic of the Pagan time, appearing then, however, only on objects of bone and metalwork.

If we arrange the symbol-bearing monuments of Class I. in a series corresponding to the relative advancement of their decorative designs, the primitive series will be found to show the forms of the symbols in outline only and the bent rods not floriated, but terminating in simple volutes;¹ while the more advanced series has the outlines filled in with groups of curved lines arranged symmetrically and the filled spaces alternating with blank spaces; the bent rods are floriated, the birds have wing and tail feathers as at Inveravon, or neck, wing, and body feathers as at Dingwall, and the serpent's body is covered with peculiarly arranged curves as at Newton in the Garioch. The drawing of the animal forms, in the case of such familiar animals as the stag, the horse, the boar, and the bull, is strikingly faithful and spirited.² But on the whole the art characteristics of these monuments of Class I. are more negative than positive. The crudeness of form exhibited by the monument itself, and the feebleness and lack of variety in the ornamentation of the conventional forms of the symbols carved upon it, together with the general absence of the human figure and of all the ingenious varieties of decoration so freely used in the monuments of the two succeeding classes, mark the monuments of Class I. as distinctly primitive and comparatively inartistic in character. In a general way, therefore, we infer that the art characteristics of the monuments of Class I. are those of a time of transition from the restricted range of the art of the Pagan time to the more fully developed art of the more highly decorated monuments of Class II.

In Class II. there is a distinct advance in monumental form and style. The stone is shaped and surface dressed to receive the sculpture, and its principal faces are bordered by a raised edging, sometimes flat, sometimes rounded or cabled. Occasionally this border assumes a zoomorphic character, the raised band along each vertical edge terminating at the top in the head and forefoot of a monstrous beast which curves inward to meet the head and forefoot of the beast rising from the edging of the other side, while in some cases the lower ends of both edgings are similarly brought round, in the shape of tails, to complete the frame in which the sculptured panels of the general decoration are set.³ The sculptured ornamentation of the faces and edges

¹ As at Logie, Kinellar, Bourtie, Fyvie, Birnie, and Tyrie.

² See the stag on the Knock-an-fruich (Grantown) stone, the horse on the stone at Inverury, the boar on the stones from Clune Farm, Dores, and Knock-na-Gael, and the bulls on the Burghead stones.

³ Examples of this are seen on the erect slabs at Dunfallandy, Cossins, Farnell, Monifieth, and Meigle.

of the slab thus prepared to receive it is usually in low relief, though sometimes incised work is mingled with the relief.

The general scheme of the decoration of these erect slabs of Class II. is that they bear a decorated cross on the obverse, and figure-subjects and symbols on the reverse. Occasionally, as at Rossie Priory and Rosemarkie, the cross is repeated on both faces, and sometimes the symbols are also found on the obverse, but such cases are exceptional. The cross on the obverse usually extends the whole length of the stone and is highly decorated, while the spaces on either side of the shaft are either divided into panels or filled with decorative designs. The reverse of the monument is sometimes wholly, sometimes only partially filled with sculpture, which is, perhaps, more frequently of a symbolic nature than purely decorative.

The cross placed as the principal object on the obverse of these monuments is not the earlier equal-armed cross, or cross within a circle, but the later long-shafted cross of the Latin form. Still there is an occasional tendency to make up the long-shafted cross by the addition of a prolongation to the shaft of an equal-armed cross,¹ as if there was a reminiscence of a time when the equal-armed cross was the customary form. It is difficult, however, to determine whether this tendency arose from traditional motives or whether it was merely the result of artistic influences—an attempt to make the unlovely long-shafted cross an object of greater beauty. The ordinary Latin cross makes angular intersections of the shaft with the arms and summit, but this cross has semicircular or segmental hollows at the intersections. It is characteristic of the Celtic treatment of the symbol of the cross both in Scotland and in Ireland that the form is subjected to artistic variations, breaking the baldness of its outlines into curves at the intersections, curves at the ends, throwing its longer outlines into sweeping curves, giving expansion to the extremities, ornamenting them with free volutes at the corners, and in many other ways refining upon the simple outlines and enriching the general effect of the original traditional form. The re-entering hollows thus formed at the intersections are mostly segments of circles. Sometimes, however, they are produced by the meeting of two segments, and in one case, at Glammis, they are formed by the meeting of three segments, the middle one of which is nearly three-quarters of a circle. Sometimes, instead of being segmented, the re-entering hollows are rectangular, and in this case the favourite mode is to make two—and there is one example at Altyre of three—re-entering rectangular spaces at the intersections. As this rectangular mode of forming the intersections of the arms with the shaft and summit left a square expanded end on each, a balancing square was formed in the central part of the cross, the corners of which projected into the spaces cut away. Sometimes the cross assumes what has been called the “glorified”

¹ As on the slabs from Holm, and Burrian, Orkney; Skinnet and Ulbster, Caithness; Monymusk, Aberdeenshire, &c.

form, having a circle connecting the shaft, arms, and summit.¹ Occasionally, also, the re-entering segments at the intersections are completely turned in relief round a sunk space, which, in some cases, is pierced quite through the stone, so that if the panels above and below the arms were cut away, the result would be a free-standing cross.

But if the advance in art characteristics of the monuments of Class II. over those of Class I. is thus manifested in the greater refinement of form and the addition of the cross as the principal feature on the obverse of the monument, it is still more strikingly exemplified in the general decoration which, appearing for the first time on Class II., is an entirely new feature of the monumental system. When it is remembered that in Class I. decoration was never applied to the monument itself, but merely to the figures incised upon its undressed surface, it becomes clear that it is in Class II. that the idea of decorating the monument as a whole is first developed. For this purpose its general form was brought under the rules of art, and subjected to such preparatory shaping and hewing as would accord with the ornamental enrichment of its surfaces. These surfaces were then spaced out in accordance with a well-known principle of Celtic art, to be decorated separately in panels, or spaces divided from the other spaces, either by a distinct border or by a distinct change in the pattern. The elemental forms used to produce the patterns are chiefly of three varieties—interlaced-work, fret-work, spiral-work, with an occasional intermixture of foliaceous work in the later examples.

Interlaced-work,² which is unknown on the monuments of Class I., appears on some of the very earliest monuments of Class II., and continues to be one of the prevailing characteristics both of the monuments of Class II. and of Class III. The interlaced-work on the Scottish monuments is similar in character to that of the crosses of Ireland, and also to that in the manuscripts of the Celtic Church in both countries; but there is a recognisable difference between the general character of Scottish work and Irish work so far as the monumental sculpture is concerned. The Scottish interlaced-work is usually smaller in its proportions and often finer in execution—more occupied with the careful working out of details and less with the broad general effect—than is the case on Irish monuments. The Scottish work has thus more of the feeling of copying from manuscripts, and less of the freedom of the sculptor in stone pure and simple.

¹ This form is less frequent than the cross without the glory, as only one in five of the crosses on the erect slabs of Class II. are of the glorified form, but it becomes much more common in Class III., when two out of every three crosses have it.

² "This system of ornament," says Ruskin, "is universally pleasing to the instincts of mankind. Nearly all early ornamentation is full of it, and illuminated MSS. depend upon it for their loveliest effects. There are several very interesting metaphysical reasons for this strange and unfailling delight felt in a thing so simple. But the more profound reason lies in the innate love of mystery and unity, in the joy that the human mind has in contemplating any kind of maze or entanglement as long as it can discern through its confusion any guiding clue or connecting plan."—*Stones of Venice*, vol. ii. p. 136.

There are two varieties of interlaced-work, one consisting of interlacements of simple bands with flat or rounded surfaces worked into figures of knots or plaits, and the other formed of the bodies and limbs of lacertine or serpentine creatures, in which the interlacing members vary in thickness with the form of the body, and vary in the number and character of the interlacements according to the positions of the limbs, which are elongated to fill out the pattern, while the tongues, tails, and top-knots are similarly attenuated and elongated to suit the exigencies of the design.

Interlaced-work of plain continuous bands, in its simplest form, consists of two or more bands interlacing and crossing each other at regular intervals, the intercrossing bands passing alternately under and over each other with unfailing regularity. They may be merely interlaced or interlooped, or some of them may be plaited and others looped, but the same combinations usually recur all the way along the pattern to its terminations, where the loose ends are joined together to make a finish. Or the pattern may consist of plaited work of three, four, six, eight, or more strands. These plaited patterns are finished off at their terminations by joining up the ends of the strands to one another in various ways; and in order to relieve the monotony of a continuous extent of plait-work, the continuity of the plait is broken at intervals by stopping off and joining up the ends of one or more pairs of the strands composing it, which produces a pleasing effect of variety. The more elaborate and complicated varieties of interlaced patterns, however, are produced by a system of loose open knot-work of one or two strands, the knots recurring symmetrically along the course of the strands. The knots may be more or less complicated, or they may be single or double, they may face to right or to left, or up or down the course of the strands, and may so be made to assume an almost indefinite number of forms and combinations. A still more complicated variety of knot-work is when the knot is encircled by one or more convolutions of the bands, which may be stopped off and returned in the contrary direction, or looped into each other and brought back to interlace with the knots they encircle. In this way these complicated knot-work figures may be worked out in circles, squares, or triangles, and the variations of the patterns that may be produced from them are practically unlimited. The decorators of the Scottish monuments, however, did not use all the possible combinations and complications to be obtained from the system of interlacing designs, and they were evidently much more partial to certain sets of combinations than to others.¹ It is difficult to find any one pattern more than half-a-dozen times in the whole range of the monuments, and the total number of distinct interlacing patterns used is certainly more than eighty, and probably less than a hundred.

The patterns formed on the zoomorphic principle of interlacing beasts are more

¹ For details, see Mr Romilly Allen's analysis of Celtic art and descriptive list of the patterns used on the monuments, in Part II. of the present volume.

restricted in their scope. The beast which is thus used for decorative purposes is essentially a creation of the designer. It may vary considerably in its details, but its general characteristics are constant, while the uses made of its attenuated body, elongated limbs, tail, and top-knot are always similar in their decorative intention. Perhaps the most characteristic examples of this zoomorphic interlaced-work are the four panels in the cross on the obverse of the monument at Nigg, in Ross shire, in each of which four of these beasts have their attenuated bodies, elongated limbs and tails, and top-knots worked into a really effective design. Sometimes, as on one of the monuments at Rosemarkie, the plain bands of an interlaced design are finished off at one end with beasts' heads, the beasts thus assuming a serpentine form. Serpents form the principal motive in the decoration of some of the finest of the Scottish monuments.¹ The manner in which they are used on the stone-work is peculiar. They are interlaced, but not in the loose open knot-work that is the usual and characteristic method of treatment for an interlaced design. They are generally associated with bosses,² formed in the majority of instances of their own bodies tightly knotted up and interlaced, while the tails and the necks and heads escape and curve round the boss on the flat, and interlace there to form a diaper over the space that would otherwise be left plain.

Key-patterns or fret-work are frequently associated with interlaced-work in the decoration of the monuments. The characteristic of the key-pattern is that it is entirely composed of straight lines placed parallel to, or at definite angles with, each other.³ The Greek fret and all the classical varieties of this ornament are constructed only on a rectangular system; but the Celtic designers, while using the rectangular system to some extent, preferred a system of their own, in which, by throwing the lines diagonally and breaking the spaces into triangular arrangements, they obtained an almost unlimited variety of pleasing designs. It has been already stated that a fundamental principle of the Celtic style of decoration is that the ornament is arranged in panels, each complete in itself, and usually surrounded by a marginal frame or border. Now, one of the difficulties of adapting fret-work to a system of decoration carried out on this principle, especially when the lines of the design impinge angularly upon the border, is to adjust the pattern to the margin, and this the Celtic designer has cleverly done by adding an inner member to the margin, and treating it as part of the pattern by bringing his lines and spaces from it. Fret-work is used very commonly in connection with interlaced-work in the ornamentation of the crosses on the obverses of the monuments of Class II., and also as a diaper covering large spaces, as in the

¹ For instance, the monument just mentioned at Nigg, and the grand crosses of St Martin and other broken cross shafts at Iona, and the cross at Kildalton in Islay.

² Sometimes, as on some of the cross shafts at Iona, the bosses take the form of an apple, and suggest the question whether the designer has not here intermingled his decoration with a frankly expressed touch of symbolism in this association of the apple and the serpent.

³ These patterns are often used with fine effects of colour in the illuminations of the manuscripts, chiefly in borders, though they appear more rarely in metal-work.

monuments at Reay in Caithness, Farr in Sutherland, and Shandwick in Ross-shire. The number of distinct patterns of fret-work exhibited on the monuments is scarcely more than twenty, but some are repeated many times on different monuments.

The spiral ornamentation of the monuments is of two kinds—(1) the divergent spiral, which is the older and is derived from the metal-work of the heathen time, and (2) the spiral proper or volute. In the former the spaces between the coiling bands become gradually wider, and finally expand quickly like the mouth of a trumpet. They are usually opposed, so that two trumpet mouths meet, and if the spirals are of many members, so as to escape in different positions round the central coil, a diaper is produced which is capable of indefinite expansion. Usually the opposed spirals are of different sizes, a large one running out and running in again to form a smaller spiral, which again uncoils and runs into one of a larger size. The effect produced in this way is much more pleasing than the monotonous repetition of symmetrical volutes of similar size. In forming a diaper with recurving spirals, they are usually arranged on a system of C-shaped connecting curves when the two spirals have similar directions of twist, or of S-shaped connecting curves when the spirals to be connected have opposite directions of twist. The C-shaped curves connecting the spirals are placed back to back and close together. A very effective variety of these spiral patterns treated like frets occurs as a diaper on the monuments at Meigle and Drainie, while both the C-shaped and S-shaped spirals are used as running borders on the monuments at Woodway, Cossins, and Golspie. Occasionally the escaping ends of the spirals are carried on into the adjacent spaces to form interlaced patterns as on the fragment from Lethnott. More frequently the spirals have zoomorphic treatment, as, for instance, at St Vigean's, where the triple spirals start from human heads or from birds' heads, with open beaks, grasping each other in the centre.

Besides the three principal varieties of decorative work, there is another variety which appears on a few only of the monuments of Class II. and Class III. This is the foliaceous scroll, which, though it is an exceptional feature of the monuments previous to the twelfth century, becomes the prevailing and dominant feature of the decoration of the West Highland monuments of a later period ranging from the thirteenth century to the Reformation.¹ The foliaceous decoration which appears first on some of the later examples of Class II., as on the inscribed monument at St Vigean's, the stone at Hilton of Cadboll, and a portion of a stone from Tarbat, has small ovate and pointed or lanceolate leaves and clusters of fruit. In the Hilton and Tarbat examples it has a more complex character, with birds and beasts lodging in the scrolls and eating of the fruit,² and is placed as a border up the two sides of the panelled face of the monument. Foliaceous ornament of a somewhat different character appears on several of the monuments of Class III., viz., on the cross-bearing slabs at Mugdrum

¹ Illustrations of these are given in Drummond's *Sculptured Monuments of Iona and the Western Highlands* (1881) and Graham's *Carved Stones of Islay* (1895).

² This is a well known classical and Byzantine motive.

and Crieff, on the edge of the great slab at Forres, on the broken cross-shafts from Closeburn and Aberlady, and on the crosses at Camuston, Dupplin, and Abercorn. A slab at Jedburgh has a series of double scrolls branching from a stem in the centre, the treatment of which resembles that of the elaborate scrolls on the crosses at Ruthwell and Bewcastle.

It is chiefly in the decoration of the cross, as the principal figure on the erect monumental slabs, that the three varieties of ornamentation which have thus been described are exhibited.¹ On the crosses of Class II. the decoration is sometimes entirely composed of interlaced-work, the patterns being made to suit the spaces of the shaft, and often to diverge to either side from the centre so as also to fill the arms. Perhaps the more usual way is to divide the cross into panels which are filled with interlaced designs recurring symmetrically; while at other times the decoration of the whole cross is accomplished by a single scheme of interlaced-work, with an ingenious adaptation of the knots or plaits to the spaces of the form. Both interlaced-work and fret-work are thus used, but it is rarely that spiral patterns are made to form the whole decoration of a cross. A common method is to divide the shaft and arms of the cross into panels filled symmetrically with two of these varieties of ornament, and, more rarely, the whole three are combined in the scheme of decoration. In this last case the spiral patterns are not so freely used as the other two, and a common mode of distributing them is to put a circle of spirals in the centre, and fill the arms, shaft, and summit separately with interlaced-work and frets.

In the same manner the conventional symbols appearing on the monuments of Class II. are often filled with patterns of interlaced-work or fret-work or spirals. On the monuments of Class I. they were merely incised in outline, but on those of Class II. they are carved in relief and their accessories are treated with greater freedom and inventiveness of decoration. The bent rods are more floriated, and their being sculptured in relief enables them to be interlaced with portions of the forms with which they are associated. That this is due to an art motive, and not to imitation of the construction of an actual object which the contour of the symbol may be supposed to represent, is shown by the fact that no two are interlaced in the same manner and that the interlacings are decorative and not constructive.

In the cases in which the symbols are really representations of actual objects—the mirror and comb for instance—this treatment by decoration of the interior spaces does not take place. It seems as if the feeling was that the decoration which was appropriate for the purely symbolic form of the cross was also appropriate for the other conventional symbols, although it was not extended to such as were of the nature of pictorial symbols, whether these may have been representations of actual objects or

¹ On the monuments of Class II. foliageous scrolls are not used in the decoration of the cross, although this is occasionally the case in Class III., and it becomes common on the free-standing crosses of the West Highlands after the thirteenth century.

of animals. It is plain, for instance, that the treatment of the beast form with the long jaws and the scroll feet, by covering the space within the outlines of its body with decorative patterns, is quite different from that of the other animals which, though they may be used as symbols, are represented pictorially¹ with free and spirited renderings of their individual characteristics. Thus the beast form with the scroll feet, which is not in any sense a pictorial representation, becomes as purely a conventional symbol as the cross, or the crescent, or the double disc, which are all treated in the same manner. It seems to be thus suggested that the conventional symbols take the decoration from an art motive, and that on that account they are not intended to be understood as pictorial representations but as symbolic forms like the decorated cross.

It is the more difficult to deal with the art characteristics of the animal representations that many of them are endowed with features of form and details of structural character that are now unknown to natural history. The art of the early Middle Ages was wholly unfettered by scientific knowledge, and the imagination of the artist was only constrained by traditions of customary representation. Ecclesiastical conceptions also restrained its exercise within certain prescribed limits as regards the representations of spiritual forms and Scriptural incidents. The forms of fabulous animals had also their idealised features prescribed by customary adaptations from traditional sources, and these adaptations, though variable within certain limits, were constant in the main features of their individuality. On the other hand, the artists who had to represent real animals known to them only by imperfect descriptions would necessarily produce different renderings of the same wild beast. Hence there is really more difficulty in recognising the particular animal for which a grotesquely imaginative representation of this kind is meant than in determining the individuality of animals entirely fabulous. The lion, however unlike the real animal in other respects, is usually recognisable by the traditional manner in which the tail is carried over the back. The fish is easily recognisable, though what particular fish may be intended is open to question. The same thing is true of the bird—it may be sometimes meant for a dove or a raven, but when we see it eating a fish, as on the St Vigean's stone, it is recognisable as the eagle of the Bestiary. The serpent is fairly true to its natural

¹ The peculiar conventionalism by which the beasts have the outline of the body doubled as it were, or the junction of the limbs with the body marked by spiral scrolls, is a feature which is characteristic of the early group of Irish manuscripts. It also occasionally appears on the later monuments of Scandinavia, and on the carvings of the earliest timber churches of Norway, such as that of Urnes in Sogn. This, however, is different from the use of the form as a vehicle of decoration. It seems to be an archaic mannerism, which is not confined to the monuments, but is seen also in the art of the manuscripts and occasionally on metal-work, as on the wings of the angels on two bronze plaques of the crucifixion (Westwood's *Miniatures*, pl. 51). A curious representation of the devil with wings constructed on this principle is shown in the *Book of Kells* (Westwood's, pl. 11), and another is carved on the left side of the doorway of the church of Notre Dame at Neuchâtel.—*Mittheilungen der Antiqu. Gesellschaft in Zurich*, vol. v. pl. xx. (1852).

characteristics—in fact more natural than might have been expected when we see it represented in ecclesiastical manuscripts or sculpture with a human face, speaking to Eve from the tree of knowledge.

But the animal which most exercised the imagination of the artist was the whale, occurring in connection with the painted and sculptured representations of scenes in the life of Jonah, from the fourth to the fourteenth centuries. During all that time the traditional form given to this animal exhibits a remarkable constancy, but with variations quite as remarkable in its features of detail. Like the centaur it is not originally a creation of Christian, but of classical art. In the Catacombs the whale that swallows and disgorges Jonah appears in the borrowed form of the sea monster that guarded Andromeda, transferred from Pagan sculpture to the cycle of Christian subjects. It is usually figured as a monstrous beast with long jaws, ears erect, and sometimes with horns as well as ears, having two forelegs but no hinder limbs, and the body tapering away in snaky convolutions to a fish-like tail.¹ The form is sufficiently remarkable and constant in its main features to be easily recognised even when separated from the special associations which belong to it in connection with the illustration of the Scripture story. For it was used isolated from its historical accessories and became, like the other pictorial symbols of the vine, and the bird, and the stag, a mere motive of decoration, possibly also like them retaining a quasi-symbolic import. The symbolism of the bird or the stag drinking from a vase or chalice easily lent itself to a decorative purpose, but in this use of the motive the figure was duplicated, a bird or a stag being placed on either side of the vase to maintain the balance of the composition. So on a sarcophagus in the Lateran Museum² the symbolic whale of Jonah is employed by a similar duplication and isolation from its historical accessories as a mere motive of decoration. In the same way, the same or a similar beast is used in the centre of the Murthly slab, and on the space on one side of the cross shaft on the monuments at Largo, at Meigle, and at Monifieth.³

The animals that are most faithfully represented are horses, deer, and dogs in action; and in the portrayal of such familiar animals there is displayed a certain accentuation of their distinctive characteristics, and a feeling for form and movement, which is very remarkable. Even the grotesque and fabulous animals are often rendered with spirited and suggestive effects of intensity of effort and malignity of character. When we consider the rigid conventionalism of the ornamental sculpture worked into patterns, and contrast it with the grace and freedom and vitality of the

¹ The whale (*cetus*) is so figured in a tenth-century MS. of Aratus in the Cottonian collection, and in another of ninth century among the Harleian MSS.

² Northcote and Brownlow, *Roma Sotteranea*, vol. ii. p. 248 (1879).

³ Compare the decorative arrangement in the Baptistery at Ravenna, where the swallowing and disgorging scenes are combined into the abbreviated form of two whales with one Jonah between them, as previously described at p. lii.

animal sculpture, we see that the last is something very different in quality from the work of the Irish illuminators. The feeling for animal characteristics¹ which pervades the sculpture of the Scottish monuments is so unlike anything elsewhere found in the art of the time, that it must necessarily be regarded as an outcome of racial aptitude—an artistic development of the Pictish character superadded to the inspiration received from the ecclesiastical manuscripts.

The hunting scene, which is such a common subject on the monuments of Class II., presents several characteristics that are worthy of notice. Sometimes, as on the Seonie stone, the whole scene is in one field of view, and covers the greater part of the stone; at other times it is in the same field of view with other pictorial subjects, and there is no obvious division of the one from the other. Sometimes it is a stag that is hunted and sometimes a hind. The number of huntsmen and dogs varies, but the hunters are usually on horseback and often armed with spear and shield, and occasionally there are placed at the side of the field two or more footmen standing, and blowing long hunting-horns. But there is a very perceptible advance in the treatment of the subject as between the earlier and later examples. If we take, for instance, a monument like that at Mortlach, which has no decoration on the cross and has its figures merely incised in outline, we find that the hunting scene is treated in quite an elementary fashion, and consists only of a single horseman and a dog at full speed. On the monument at Elgin, on the other hand, where the cross and the symbols are highly decorated, the hunting scene consists of four horsemen and three dogs pursuing a stag, which one of the dogs is in the act of seizing by the flank. On the still more highly decorated monument at Hilton of Cadboll the hunting scene is still further developed, the horsemen are armed with spear and shield, and two footmen are added blowing long hunting-horns. On another monument at Shandwick, still more strikingly characterised by the profusion and elegance of its decoration, the panel containing the hunting scene presents no fewer than twenty-two figures of horsemen, dogs, and various beasts.

But perhaps the most interesting phase of the advance in art characteristics which is manifested in the sculpture of Class II. is the frequency with which the human figure is introduced as compared with its complete, or almost complete, absence from the sculpture of Class I. Its interest arises, however, not so much from artistic as from archaeological reasons, for the Celtic sculptor was much more successful with the animal forms and complicated schemes of ornament than with his human figures. But he dressed them and armed them with praiseworthy atten-

¹ A certain feeling for the portrayal of animals is exhibited in the archaic designs of the early Iron Age in Central and South-Eastern Europe. The groups and processions of animals worked in repoussé on the bronze *situle* and other objects of this period do seem to present suggestions of a possible far-off affinity with the Scottish monuments; but similarity of motive alone is too feeble an argument on which to hang a theory of origin.

tion to detail, and for these incidental illustrations of the life of a far-off time the archæologist is thankful. As the seals, and brasses, and monumental effigies of the pre-Reformation period are invaluable aids to history on account of the details they have preserved of the costume, the arms and armour, and other equipments of civil, military, and ecclesiastical personages, so here we have an abundant field of illustration of similar value for times that have no other history. For in their symbol-pictures the sculptors reproduced the dress, ornaments, arms, and accoutrements of their own time, and by a careful scrutiny of the details of these quaintly rendered figures of huntsmen, warriors, and ecclesiastics, we obtain illustrations of the life and habits, the costume and arms, and the arts and industry of the ancient inhabitants of Scotland.

When we come to consider the art characteristics of the monuments of Class III., and compare them with those of Class II., we find that we have to deal with a much greater variety in the monumental forms. Hitherto, that is throughout the periods of Class I. and Class II., there has been but one variety of form—the upright slab, shaped or unshaped. In Class III. we have still the upright slab, now often of great size, the splendid stone at Forres being 23 feet by 4 feet and 15 inches thick; and we have also the following additional varieties:—free-standing crosses, recumbent monumental stones (eoped, hog-backed, or rectangular) placed horizontally over the grave; altar, or table-shaped tombs; and occasionally a sarcophagus hollowed from a single stone. But the erect slabs are now beginning to fall into disuse, and their older symbolism, which has been gradually giving place to the symbolism of pictorial subjects, has quite died out. The cross on the monuments of Class III. is still of the Celtic form with re-entering segments at the intersections, but it is now more frequently glorified, two out of every three crosses bearing the glory, whereas the proportion in Class II. was only one in every five. The sculpture on the free-standing crosses is often in much bolder relief, and in a few cases there are representations of the crucifixion,¹ which, though it appears in several of the illuminated MSS. of the Celtic Church and on some of the Irish and Cornish crosses, did not become common in sculpture—in Britain, at least—until after the eleventh century.

There is no great variation in form among the free-standing crosses of Class III. They are all of the Celtic type, with re-entering hollows at the intersections, the variation consisting merely in the presence or absence of the circular ring connecting the shaft with the arms and summit. The Irish high crosses usually have the ring, and the Scottish examples which show this feature are all on the western side of the

¹ The crucifixion, which only appears once on the upright slabs (at Kirkholm, in Wigtownshire), is found five times on the free-standing crosses. On the Camuston cross the spear and sponge-bearers are shown partially doubled-up, on account of the contracted space, in a manner quite like that of some Irish representations. The incised crucifixion on the Kingoldrum slab must be of rather late date.

country, the best being St Martin's Cross at Iona, and the Kildalton Cross in Islay.¹ The cross without the glory is more common, as at Keils, Camuston, and Dupplin. These have small semicircular hollows at the intersections, but there is a variety in the southern district which has larger hollows of an almost ogee shape, so that the arms of the cross expand towards the extremities. In Wigtownshire the crosses have mostly circular heads, the arms being merely indicated by four smaller circles placed tangentially within the circumference.

The recumbent monuments with Celtic ornamentation are not very numerous. The boat-shaped or hog-backed stones, of which there are good examples at Meigle and Govan, Incheolm and Abercorn, sometimes have their sides ornamented with scales placed like the tiles on a roof, and the ends of the stone frequently terminate in the likeness of a beast. They do not all show Celtic ornament, and the inference is that they belong to the time when this kind of ornamentation was falling into disuse.

It thus appears that there is a gradual and continuous advance of artistic character traceable throughout the whole series of the monuments. Commencing with the symbol-bearing monuments of Class I, we find that the few art characteristics which they possess are clearly primitive. The monument itself is a mere natural boulder, unshaped and unhewn: the symbols are simply incised in outline, and the decoration of the spaces within the outlines a merely elementary arrangement of curves and dots. In Class II. the stone is shaped to a monumental form, and surface-dressed and sculptured in relief, and the nature of the decoration applied to it differs entirely from that of Class I, inasmuch as in Class I. it was applied only to the figures incised on the face of the monument, whereas in Class II. it is the whole face, or both faces and both edges, of the monument that are so treated. The decoration itself becomes also much more varied and complex in character, and the simple linear arrangements of Class I. are replaced by the fully developed patterns derived from the divergent and re-entrant spirals, or elaborately constructed of interlaced-work and frets. Foliageous scrolls and borders of foliage, with birds and beasts lodging in the branches, occasionally appear. The decorated cross, enriched with panels of elaborate ornamentation of interlaced-work, fret-work, and spirals, becomes the principal feature on the obverse of the monument. Hunting scenes and Bestiary subjects are introduced, and the development of their details and accessories proceeds from the simple picture symbol in its elementary form to the highly elaborated representation in which the action in all its details is carried on concurrently by a crowd of accessory figures. Incised-work and relief are sometimes found together on the stones of the transition period, but low relief is the prevailing characteristic. In the monuments of Class III. the relief becomes bolder and freer,

¹ The later crosses of the West Highlands with foliageous ornamentation have also this feature, but in a curiously modified form, the ring becoming a closed and solid disc of stone from which the arms and summit protrude.

the ornamentation derived from the divergent spiral becomes less frequent and gradually dies out, foliageous ornamentation becomes more common and fret-work more rare, interlaced-work, too, begins to die out, and the beauty and variety of its patterns are diminished by the increasing frequency of simple plait-work and the use of rings instead of knots. High crosses of the free-standing form become common, and the erect headstone form of monument begins to give way to the recumbent slab, which after the twelfth century became the prevailing form of sepulchral monument.

V.—THE ART RELATIONS OF THE MONUMENTS.

The early Christian monuments of Scotland are closely related by the character of their decoration to the illuminated manuscripts of the Celtic Church and to the metal-work, ecclesiastical and secular, of the period ranging approximately from the seventh or eighth to the eleventh or twelfth centuries. The illuminated manuscripts are known to be Celtic, or Hiberno-Saxon, by the peculiar style of their caligraphy and by their characteristic style of illumination, which differed from all contemporary styles, and still more certainly by the names of the scribes and other memoranda inserted in the vernacular language of the writers, the body of the manuscript being usually in Latin, as they are for the most part copies of the Gospels or Psalters or other ecclesiastical service books. The metal-work, which corresponds in the nature of its decoration to that of the manuscripts, is chiefly ecclesiastical in character, including such objects as book covers, bell shrines, reliquaries, crosiers, chalicees, &c., and the secular metal-work consists chiefly of personal ornaments, such as brooches, &c., some of which may also have had ecclesiastical associations.

The decorative work of the monuments being thus related to a general phase of art which is known to be Celtic and to have been applied alike to objects of ecclesiastical and secular use, it becomes a matter of some importance to trace the origin and development of a style so prevalent and characteristic.

The earliest Christian monuments of Scotland—or, for that matter, of Britain—do not show any traces of Celtic art. They show indeed but little trace of any art, but what little they do show is Roman, not Celtic. They are the memorials of a time when Christianity was still a foreign influence, when the Christian communities were small and scattered settlements in a land full of heathenism, and their culture, their habits, and their doctrines were alien to the soil and unfamiliar to the people. Consider the case of these primitive ecclesiastical settlements—say that of St Ninian among the heathens of Galloway. The stone church which he built with the aid of his Gaulish masons was the first edifice of the kind which had been seen in the

country. The service books used in it were Roman in their caligraphy and art, if they had any art. The whole ecclesiastical paraphernalia were Roman in style. Even the few monuments of the early days of Christianity in Scotland were Roman in their symbolism and in the language, formule, and lettering of their inscriptions. All this was natural and inevitable in the circumstances. But in course of time the circumstances changed.

The Church planted by St Ninian in Scotland and the Church planted by St Patrick in Ireland were cut off from intercourse with the continental Churches by the barbarian invasions, and while St Ninian's Church failed to maintain an organised existence, the Church of St Patrick grew and flourished. It was a native Church, with few or no foreigners among its ecclesiastics, and as a matter of necessity it must have begun immediately to make use of the native handicrafts for its own purposes. As soon as its system of education produced native readers and scribes, it proceeded to multiply copies of the Gospels and Psalters and service books for the ever increasing number of new foundations requiring to be thus supplied. And when, in course of time, its influence extended to Scotland, the self-same process must have gone on repeating itself.

It does not appear on record that illumination was a general characteristic of their earliest service books, but before the close of the seventh century their manuscripts began to be distinguished from all others by the magnificence of their decorated pages and the intense Celticism of their art. We know too little of the earlier history of the style to warrant us in drawing conclusions as to the precise manner of its development. But there was in the indigenous culture of the people a source of artistic potentiality which sufficiently accounts for the unparalleled efflorescence of their art of the Christian time. There had been a phase of Celtic art of the Pagan period which had flourished in Britain and Ireland for centuries before the introduction of Christianity, and which appears to have reached its maturity even before the Roman invasion. As this early Celtic¹ art of the Pagan time was undoubtedly the living stock into which the new elements of the Christian art were grafted, it is necessary to notice briefly its essential features.

The two chief characteristics of the Pagan style of Celtic art, are its use of the diverging spiral and its derivative patterns to the almost entire exclusion of every other system of ornament, and its use of enamels for surface decoration. The objects so decorated are mostly of bronze. They consist of mirrors, armlets, sword-sheaths, shields, and to a large extent of horse-trappings, and the area over which they are

¹ I call it "early Celtic" because I speak of it solely with reference to the British Isles. Mr Franks, who was the first to describe its peculiar characteristics, and to recognise it as a decorative style, has called it "late Celtic" with reference to a presumed earlier Celtic style manifesting itself over a much wider area. Hence, the period of its manifestations is usually spoken of in the wider sense as "The Late-Celtic Period," extending in Britain from about the third century B.C. to the period of the early Celtic Church.

found includes almost the whole extent of the British Isles.¹ That these objects belong to the pre-Christian period is shown by their occurrence among the grave-goods of Iron Age interments in Southern Britain. That the art was perfected and had reached its culminating stage coincident with the time of the Roman occupation is shown by the occurrence of objects of distinctively Roman character, such as coins, Samian ware, and patellæ of bronze, in association with objects bearing this distinctively Celtic style of decoration both in England and Scotland, but nowhere else.

This decorative style, as applied to the enrichment of metal-work, may be chased, or engraved, or embossed, or the reliefs may be cast in the solid, or it may be carried out in *champ-levé* enamel.² A few examples will suffice to show the nature of the ornament and its relation to that of the later Christian time.

A mirror (fig. 1) made of a massive plate of bronze and deposited with a Pagan



Fig. 1.—Mirror of bronze from Birdlip. $\frac{1}{4}$.

¹ See a list of the localities in which "Late-Celtic" objects have been found, compiled by J. Romilly Allen, in *Archæologia Cambrensis*, vol. xiii., fifth series (1896), p. 321.

² The use of enamels in Celtic pre-Christian art is illustrated by Mr Franks in *Horæ Ferales*, pp. 172–196 and pls. xiv.–xx.; in a paper by Mr V. Ball and Miss M. Stokes on the



Fig. 2.—Crescentic plate of thin bronze found with a mirror and other articles at Balmacellan, Kirkeudbrightshire. Not to scale.

burial at Birdlip, near Gloucester,¹ affords in the ornamentation of the back a characteristic example of the style, in a scroll-like pattern of flowing curvilinear lines and spaces filled with hatchings of short parallel lines arranged in chequers. The pattern is so disposed that the hatched spaces and the plain spaces alternate and balance each other symmetrically. In the smaller crescentic ornament above the junction of the handle is a characteristic example of the diverging spiral or trumpet pattern with the peculiar almond-shaped figures at the junction of the trumpets.

A similar geometric scroll of curvilinear lines and hatched spaces appears on a large crescentic collar-shaped plate of thin bronze, which was found with a mirror and a number of unornamented plates of thin bronze of different shapes at Balmaclellan in Kirkeudbrightshire.² In this case the objects were not found with a burial but seemed rather to form part of a hoard of articles deposited in the earth for concealment. The most highly ornamented of the objects is the crescentic or collar-shaped plate of thin bronze (fig. 2) with a turned over marginal border pierced with holes as if intended to be affixed to something by pins. It is 13 inches in greatest diameter, the width of the band being 2 inches. It is ornamented with a beautifully executed chased pattern of a scroll of double connecting spirals enclosing smaller double spirals or going off in flamboyant scroll-like expansions filled with chequers and hatched spaces. The scroll is broken in the centre of the arch by a quadrilateral panel with a diagonal arrangement of a double spiral, and on either side of this keystone-like centre piece the scroll on both sides is symmetrically arranged, although the parts are not absolutely identical.³ The mirror (fig. 3) is of the form seen on the sculptured monuments, and is ornamented above the junction of the handle with an embossed trilobate plate of very thin bronze kept in place by its edges being inserted under the turned over marginal rim of the mirror. It is here shown of the full size (fig. 4) and is peculiar in having three rosette-like arrangements round a central boss with a triangular depression in its upper part.⁴



Fig. 3.—Mirror found at Balmaclellan. $\frac{1}{2}$.

use of enamel in Ireland in the *Transactions of the Royal Irish Academy*, vol. xxx. p. 277 and pl. xix.; and by Mr J. Romilly Allen in a paper in *Archæologia*, vol. liii. p. . . For descriptions of objects with Celtic enamel found in Scotland, see *Proc. Soc. Ant. Scot.*, vol. xv. pp. 320 and 342; vol. xix. p. 247; vol. xx. p. 396; vol. xxvi. p. 81.

¹ *Transactions of the Bristol and Gloucestershire Archaeological Society*, vol. v. p. 140.

² *Proc. Soc. Antiq. Scot.*, vol. iv. pp. 293, 417.

³ Compare the scrolls on the sword-sheaths found in the crannog at Lisnacrogghera in County Antrim. *Journal of the Royal Society of Antiquaries of Ireland*, vol. vi. (4th series) p. 384, and vol. ix. (4th series) p. 100.

⁴ Compare the discs with included triangles in the page of spiral ornament from the Book of Durrow in fig. 11.

The trumpet-shaped ornaments meeting each other in pairs, the long sweeping curves bounding trumpet-shaped spaces, and the almond-shaped prominences dividing

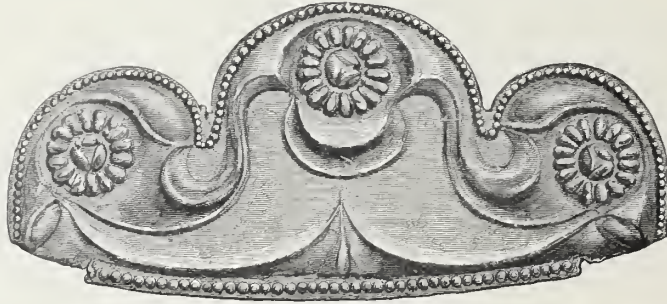


Fig. 4.—Ornamented plate of mirror found at Balmaclellan. $\frac{1}{4}$.

them, are seen on a series of massive armlets of bronze which are peculiar to Scotland.¹ They are of two varieties, one of which seems to pass into the snake-shaped form of armlet, and both of which are usually enriched with ornamentation of *champ-levé* enamel. A typical example is shown in the pair (fig. 5) found in one

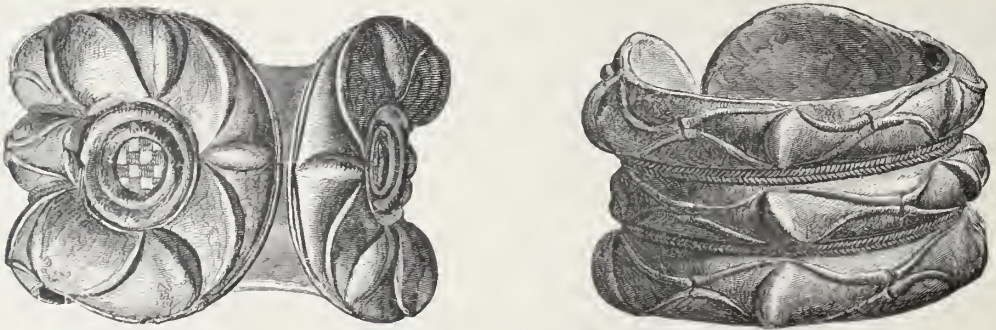


Fig. 5.—Pair of bronze armlets with enamelled plaques in the circular spaces found at Castle Newe, Aberdeenshire. $\frac{1}{4}$.

of those curious, underground, curved galleries or earth-houses at Castle Newe, in Strathdon, Aberdeenshire.² In form they are penannular, with slightly expanded and rounded ends having circular spaces in the centre of the expansion, which are filled with enamelled plaques showing chequered patterns of red and yellow.

¹ Ten examples of these armlets have been found in Scotland, and one in Ireland. They are all described and figured in *Scotland in Pagan Times (The Iron Age)*, pp. 141–155.

² These underground galleries or earth-houses occasionally contain relics of the time of the Roman occupation, such as Samian ware, &c. In the case of the Castle Newe one, a denarius of Nerua (A.D. 96–98) was found in the course of the excavation. See the chapter on earth-houses in *Scotland in Pagan Times (The Iron Age)*, pp. 282–307.

The same ornamentation is seen on the massive snake-shaped armlet of bronze (fig. 6) found on the Culbin Sands, Morayshire, the eyes of which are set with blue glass, the heads also showing disc-shaped spaces which appear to have been filled with enamel.

Occasionally the terminations of the scrolls exhibit a tendency to assume the

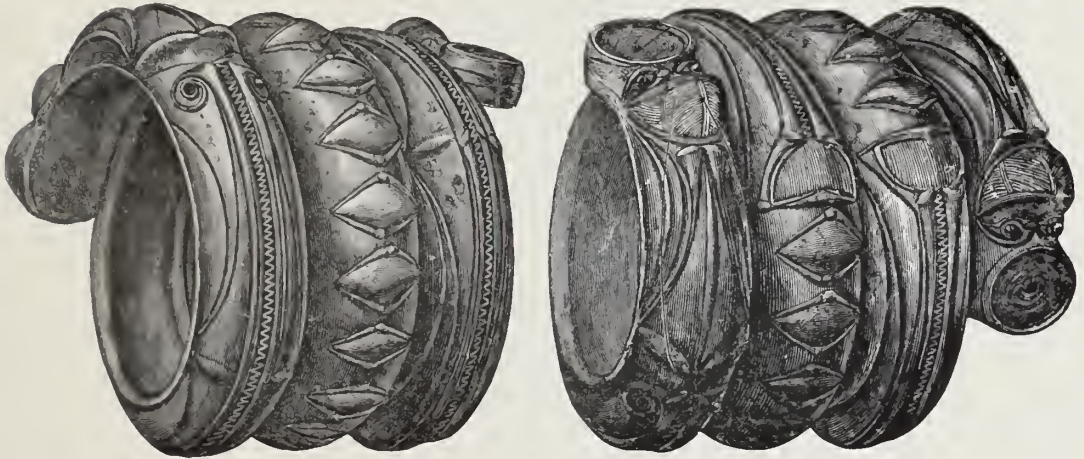


Fig. 6.—Snake-shaped armlet of bronze found on the Culbin Sands, Morayshire. $\frac{1}{2}$.

form of an animal's head, as may be observed on some of those in the next two examples, and this zoomorphic feature may be compared with the interior terminations of the spiral scrolls drawn on the manuscripts or sculptured on the monuments of the Christian period.

The bronze ball found at Walston in Lanarkshire (fig. 7) shows on one side a



Fig. 7.—Bronze ball found at Walston, Lanarkshire. $\frac{1}{2}$.

scroll terminating in a figure somewhat resembling a bird's head with an oval up-standing crest. The same figure may be seen forming the interior terminations of the spirals in the square of spiral ornament from the Book of Lindisfarne

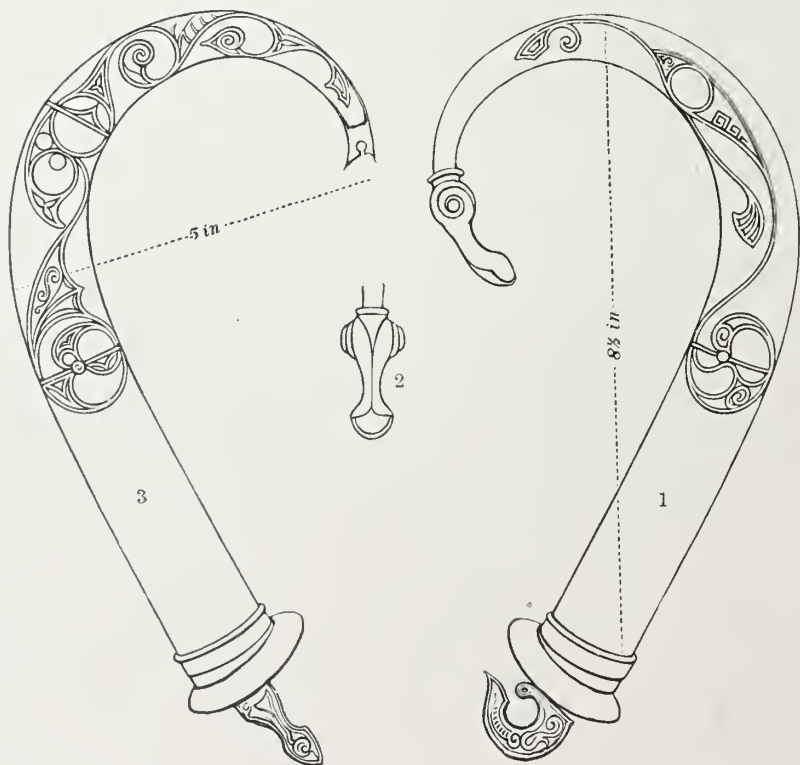


Fig. 8.—Bronze mask or chanfrein and diagram of the ornamentation of the horns. 3.

(see fig. 12), where it appears in its true character as a development of the divergent spiral with the almond-shaped markings.

This zoomorphic tendency is more distinctly seen in the scrolls in relief on the bronze mask or *Chanfrein* (fig. 8) found at Torr in Kircudbrightshire. Here the animal's head terminating the scroll has an eye, and the fore-part of the head is prolonged into a scroll-like snout. The horns, which end in beasts' heads, are chased on the outer sides with similar ornamentation.

The same style of ornament, but less flamboyant and more symmetrically geometric in character, is seen on the circular enamelled plaques which were fixed on the exterior rims of bowls or small caldrons of thin bronze¹ to carry the rings for suspension. The plaques were furnished with an upstanding half-loop, usually in the form of a bird's neck and head, which bent forward and slightly downward, so that the bill of the bird impinged upon the top of the rim of the caldron and thus formed a loop. The plaque here figured (fig. 9) was found with others of the same character at Chesterton



Fig. 9.—Bronze plaque ornamented with a pattern of divergent spirals in red and yellow enamel found at Chesterton. $\frac{1}{4}$.

in Warwickshire.² The pattern of triple divergent spirals with almond-shaped divisions separating their expanded extremities is carried out in *champ-levé* enamel of red and yellow. Similar plaques with similar half-loops from Middleton Moor, Derbyshire, and from Ireland are figured by Jewitt.³ Undset also mentions others in the

¹ For a detailed account of these bowls or small caldrons found in the British Isles see a paper by Mr J. Romilly Allen in *Archæologia*, vol. lvi.

² *Archæological Journal*, vol. ii. p. 162.

³ Jewitt's *Grave-mounds and their Contents*, p. 260.

York Museum, and states that these enamelled caldrons, of which sixteen examples have been found in Norway, were certainly imported into that country from the Celtic area of the British Isles. He refers also to the numerous finds of objects decorated with Celtic ornamentation in the ancient Irish style which have occurred on the Norwegian coasts and are due to the plundering expeditions of the Northmen, which began to be directed against the Scottish and Irish coasts in the latter part of the eighth century.¹ A bowl-shaped receptacle for a small pair of scales and weights—a common accompaniment of Viking burial—which was dug up at Jaaten in Norway (fig. 10), presents

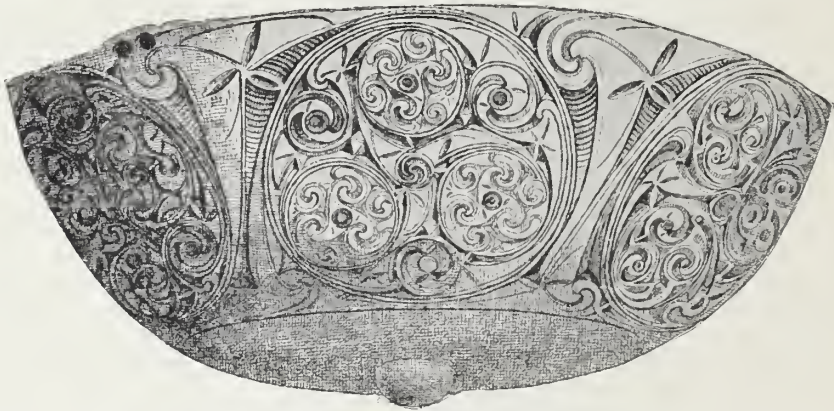


Fig. 10.—Bowl of bronze found at Jaaten in Norway, with divergent spiral ornament. $\frac{1}{4}$. (From *Foreningen til Norske Fortids Mindesmarkers Bevaring*, 1891.)

a very characteristic example of the divergent spiral decoration in bronze gilt, which may be compared with the similar patterns on the illuminated page of the Book of Durrow shown in fig. 11.

Throughout the Pagan period this system of decoration was restricted in its scope by the restricted nature of the Pagan culture. But with the introduction of Christianity the scope of the art was widened, and under the influence of the higher culture it was exalted in its aims and purposes. Its resources expanded as its aims expanded. Instead of mere personal embellishment, its task was now the fitting decoration of the

¹ Professor Rygh, describing the series of objects in silver and bronze gilt with ornamentation in the Irish style, of which more than fifty finds are known in Norway, remarks that the ornamentation is in an Irish style so pure that one is obliged to conclude that they were made either in Ireland, or in Scotland or England after the Irish style had become prevalent in these countries, and most of these objects must have come to Norway as a result of the intercourse between Norway and the Norse colonies planted in Ireland and Scotland. Rygh, *Norske Oldsager*, Christiania, 1885, Nos. 618–637 and 697, and p. 76; Undset, “La Dernier Age de Fer in Norvege,” *Memoires de la Soc. Roy. des Antiquaires du Nord*, 1890, p. 37.

objects used in the services of the Church. Accordingly, it sought to beautify the pages of the manuscripts of its Gospels and Psalters with illuminated work of a character befitting the sacredness of the purpose. It sought to enshrine the relics of its saints—their books, bells, and crosiers—in costly cases of silver or bronze, enriched with chased designs or golden filigree, and set with jewels and enamels, and finally it came to execute in the most elaborate manner the sculptured decoration of the monumental slabs and crosses erected for memorial or ecclesiastical purposes.

In all these varieties of objects the earlier examples exhibit unmistakably the influence of the art of the pre-Christian time, especially in the general prevalence of the spiral designs as a prominent feature in the system of decoration. But the Christian art differs from that of the pre-Christian time, inasmuch as it is no longer confined to the spiral and its derivative designs, but has adopted or developed two new varieties of decoration, interlaced-work and frets, and by the use of the three, separately or in combination, in course of time has created an entirely new style. We can trace the growth of the style in the manuscripts, on the metal-work, and on the monuments, by the manner in which the interlaced patterns and frets are used with increasing prevalence in the system of decoration, while, as the varieties of pattern derived from them increase in number and complexity, the spiral patterns diminish in vogue, and finally die out.

The existing manuscripts of the early Celtic Church and of the Anglo-Saxon Churches which derived their origin from Celtic sources are divisible into two classes by the style of their caligraphy.¹ The first style is a round hand remarkably bold and firm, and closely resembling the Roman half-uncial of the MSS. of Italy and France of the fifth and sixth centuries. The Book of Durrow is written in a good hand of this style, and the Book of Kells is the finest example of its culminating period in Ireland. This round hand was introduced into the schools of the earliest Northumbrian monasteries founded by the Columban monks from Iona in the middle of the seventh century, and we have a magnificent example of it in the Gospels of Lindisfarne, which rival even the Book of Kells alike in the grand firmness of the writing and in the gorgeous beauty and splendid elaboration of the illumination.

From this round hand the pointed minuscule hand was developed, of which the first dated example is supplied by the Book of Armagh written by Ferdomnach the scribe, whose obit is given in the Annals at A.D. 844. No doubt the two styles continued for a time concurrently, but eventually the grand round style gave way to the more current and convenient pointed style, which continued to be the universal manuscript hand till the introduction of printing, when it became the foundation of the recent Irish printed character.

The manuscripts may also be separated into two classes by reference to their

¹ See the chapter on Irish Writing in the *Handbook of Greek and Latin Palæography*, by E. Maunde Thomson, pp. 236–247.

illumination.¹ In a general way it may be concluded that those which exhibit the influence of the pre-Christian style to the greatest extent may be placed nearest to the pre-Christian time. In other words, the manuscripts which show the spiral system of decoration with its characteristic features least altered are the older group, and those which show it most altered, or in whose decorative system it has been supplanted by other designs, are the later group. The Book of Durrow (from which a page of spiral patterns with a border of interlaced-work is given in fig. 11) may be taken as typical of the earlier group. The Book of Kells and the Gospels of Lindisfarne, by the unparalleled excellence both of their writing and of their illumination, mark the culmination of the art in Ireland and in Northumbria. Both are character-



Fig. 12.—Square of divergent spiral ornament from an illuminated page in the Book of Lindisfarne. Enlarged to twice the actual size.

ised by the remarkable beauty and purity of their spiral decoration, of which an example from the Book of Lindisfarne is given in fig. 12. But there is one feature in the decoration of the Book of Kells which is entirely absent from the Book of Durrow and the Lindisfarne Book. In neither of these is there found a single trace of the floral or foliaceous element, which appears for the first time in the Book of Kells, marking a turning point in the progress of the art towards a phyllomorphic system of designs which remained the least characteristic feature of the manuscripts, but became increasingly prevalent in the later sculpture and metal-

¹ Dr Sophus Muller accepts the year 900 as the approximate chronological division between the older and later styles of decoration, the older style being chiefly characterised by the conventional beast motives and the diverging spiral patterns, and the later style by the comparative rarity or complete absence of the spiral motives, the presence of leaf-work and serpents, and lastly, of winged dragons. These last, however, generally indicate a date after A.D. 1000—*Dyromamentiken i Norden—Nordisk-Irsk Ornamentik in Aarboger for Nordisk Oldkyndighed* for 1880.



Fig. 11. —Page of spiral ornament with border of interlaced-work from the Book of Durrow.

work. But it is noteworthy that not the least trace of a floral or foliaceous motive is to be found in the Lindisfarne Gospels, which were written and illuminated there between the years A.D. 698 and 721.

The presumption, therefore, is that the introduction, or at least the general adoption, of this foliaceous system of design into the art of Northumbria had not taken place till after the commencement of the eighth century,¹ and, consequently, that its date in Scotland must be placed even later. As to the date of the Book of Kells, it can only be said that it represents the culminating period of the art in Ireland, and if the phyllogomorphic element in its designs be any criterion, it is much more likely to be later than the Gospels of Lindisfarne than to belong to an earlier period.²

As a rule, the ornamentation of the Celtic manuscripts is more of the nature of decoration pure and simple than of illustration of the subject-matter of the text, and shows itself chiefly in the elaboration of initial letters and the insertion of complicated borders or headings. Sometimes, as at the commencement of the different Gospels, an initial page is devoted to an elaborately constructed design, of which the centre may be a decorated cross, or to a figure of the evangelist whose Gospel it precedes, or, more rarely, a pictorial representation, such as the Virgin and Child or the Crucifixion. The initial letters are frequently constructed as animal forms conventionally treated, and occasionally they are of gigantic size, filling the whole length of the page, and divided into spaces or panels, each filled with a different pattern of spirals, interlaced-work, or frets. Sometimes the initial letters of an important portion of the Gospel, such as the genealogy of the Gospel of Matthew, are enlarged so as to fill the page, and interwoven with a profusion of spiral, linear, and zoomorphic patterns arranged in symmetric and rhythmic designs shown up by contrasts of colour, and all carried to an extent of elaboration so bewildering, and yet so charming in the

¹ Dr Sophus Muller says the leaf-work of the Northumbrian style is not Roman but Carolingian, and it would be difficult to cite examples of similar leaf-work from Italy or France prior to the Caroline renaissance. *Dyroramentiken i Norden in Aarboger for Nord. Oldkyndighed*, 1880, p. 338.

² The tendency now is to lessen the conjectural antiquity of the earlier group of Irish manuscripts. In the publications of the *Palæographical Society* the editors (Messrs Bond and Thompson) say of the Book of Kells that, "judged independently of tradition, it may be ascribed to the seventh century, but that in the writing of the *breves cause* of the Gospel of St John some of the letters closely correspond in form with those in finely written English charters of the eighth century." Dr T. K. Abbot, admitting that the date of the work cannot be fixed with precision, concludes that the Book of Kells must be later than the Book of Durrow, and rather later than earlier than the Gospels of Lindisfarne, and as its writing closely resembles that of the Gospels of St Chad, he thinks it may be assigned with probability to the eighth century. M. Berger, approaching the subject from the textual character of the MSS., declines to follow those authors who place the Book of Durrow at the commencement of the seventh century, and observes that the more prudent place the whole group, including the Books of Durrow and Kells, the Book of Dimma, the Book of Moling, and the Codex Usserianus, about the commencement of the ninth century.

perfect balance and finish of its parts, that the more the result is studied, the deeper becomes the impression of its inimitable originality, grace, precision, and skill.

The earlier group of Celtic MSS. thus show their lineal descent from the Roman and Gaulish MSS. of the fifth and sixth centuries, so far as their system of writing is concerned. But with their illumination the case is altogether different. It is impossible to show, by reference to existing manuscripts of European origin, the source or sources from which the early school of Celtic illuminators copied their motives of decoration—if they did copy them.¹ No Byzantine or Italian-Byzantine manuscript is known which exhibits any close correspondence with the Celtic decorative style. But that the earlier Irish and Anglo-Saxon manuscripts do reflect the influence of Byzantine manuscripts to some extent is evident from the correspondence of the pictorial representations of the evangelists prefixed to their Gospels. This is especially seen in the Gospels of Lindisfarne, in which the names of the evangelists are given on the pictures with the title *o agios*, not in Greek letters, but in the ordinary lettering of the manuscript. While, therefore, the Celtic illuminators undoubtedly imitated the pictures of the Byzantine manuscripts, it is clear that they could not have got from them the characteristic decorative style² which is quite a unique feature in all the early works of Celtic Christian art, whether in manuscripts, metal-work, or sculpture in stone.

The early Wisigothic, Burgundian, and Frankish manuscripts use interlaced-work of a feeble and simple kind, but they also use foliaceous ornament, which is never employed in the early Celtic illuminations, and they have no spiral designs, which are the characteristic feature of early Celtic work.³

From whatever source the Celtic designers derived their systems of interlacing designs and frets,⁴ it is evident that their unparalleled efflorescence was an outcome

¹ By the modern axiom, "Everything is derived from something else," there is no allowance for originality; but the copy can only be proved by the production of the original.

² A writer in the *Revue Benedictine* has pointed out that there is evidence in the Book of Lindisfarne of the existence of Italian books in the scriptorium in which it was executed. "But judging from still extant specimens of Italian book-decoration of contemporary or earlier date, it is apparent that the Northumbrian manuscript, so far as its writing and ornamentation are concerned, owes little or nothing to any models found in Italian illuminated manuscripts of the seventh or earlier centuries. Its ornamental compositions are marked by pure and unmixed Celticism." *An Inquiry into the Art of the Illuminated Manuscripts of the Middle Ages—Part I.: Celtic Illuminated Manuscripts*. By Johan Adolf Bruun, Edinburgh, 1897, p. 53.

³ It has been suggested that the Irish style was largely influenced by the Carolingian MSS., but it cannot be forgotten that the art in Ireland had reached its highest perfection in the century previous to the Caroline renaissance. Any Caroline influence which may be traced in the Irish MSS., therefore, belongs to the period of the decadence of Irish art. See Unger, "La Miniature Irlandaise," in *Revue Celtique*, vol. i. p. 14; and Muller, "Carolingisk Ornamentik," in *Aarbog for Nord. Oldkyndighed* (1880), p. 324.

⁴ Dr Sophus Muller says of the meanders and frets that as such linear motives are found to have been developed independently in different regions, there is no necessity for

of the Christian culture, and that the composite style of decoration, freely using the three elementary systems of spiral, interlaced, and fret-work designs, was not only fully formed, but had reached its highest perfection by the close of the seventh century. About that time or shortly afterwards the phyllo-morphic system of design was added to the decorative elements in use in Northumbria, and gave a special character to the sculptured monuments of that area. It is probably to Northumbrian influence that we owe the sporadic diffusion of such designs on the Scottish monuments.

But the Northumbrian style was Irish in its origin, as its essential characteristics sufficiently prove, and when we examine the salient characteristics of the early incised monuments of north-eastern Scotland, we find that they also exhibit certain peculiar features of correspondence with the early Irish manuscripts. The most characteristic feature of the incised sculpture of these monuments is the firm precision and excellence of the drawing of the animals, which is not a special characteristic of the Irish manuscripts. But this firmness and excellence of the drawing is combined with a curious conventionality of representation, which consists in a peculiar doubling of the outline of the body and marking of the junctions of the limbs by sweeping curves of the divergent spiral, as is most strikingly apparent in the representations of the Burg-head bulls. This is a feature which is characteristic of the early group of Irish manuscripts¹ and of the incised monuments of Class I, though it ceases to be common and finally dies out in the relief sculpture of Class II.

It is in Class II., however, that the closest correspondence with the Irish manuscripts is generally exhibited. Almost all the characteristic spiral patterns of the early group of manuscripts are to be found on the upright cross-slabs of Class II., combined with almost every variety of the interlaced-work and fret which form such conspicuous elements in the decoration of the manuscripts of the best period of the art. Indeed, some of the Ross-shire slabs at Hilton, Tarbet, and Nigg, with their wide borders and panelled spaces, suggest an obvious imitation of the effect of a decorated page of a manuscript.

Though many such manuscripts have been preserved in Ireland and in England and on the Continent, in the localities frequented by Irish monks of the early Celtic Church, we have, unfortunately, no representative series of examples left in Scotland

supposing that they were taken over by the Celts from any foreign source, although it is not impossible that they may have been derived from Roman art. The same may be said of the plaited and interlaced-work, which, as is proved in the case of other styles of art, can be developed independently. The interlaced beast patterns are not borrowed from any foreign source, but are legitimate developments of the Celtic style itself, which proceeded from linear ornament to animalistic ornament by adding heads, feet, tails, and top-knots to the linear bands of the framework of the initial letters of the manuscripts. "*Nordisk-Irsk Ornamentik*," in the *Aarbojer for Nordisk Oldkyndighed* (1880), p. 284.

¹ In Ireland at a later period this peculiar conventional feature becomes a volute or regular spiral of many turns. In this form it survives till it is found on the beasts embossed in silver on the cumdach of the Stowe Missal, in the second quarter of the eleventh century.

from which it might be gathered what were the special peculiarities of the manuscripts of the early Church in the territory of the Picts. We know from the Martyrology of Aberdeen that St Ternan had a copy of the Gospels in four volumes, of which the first, containing the Gospel of St Matthew, was still preserved at his church of Banchory Ternan, enshrined in a silver case or *cumdach* decorated with gold, at the time when the Martyrology was written, about the middle of the sixteenth century.¹ Had but one of St Ternan's manuscript volumes been preserved, it might have given some clue to the origin of the ornamentation and symbolism of the monuments of the area over which the influence of his ecclesiastical foundations extended. According to Wyntoun, the copy of the Gospels, which was such a highly venerated manuscript that it was enshrined in a silver case or *cumdach* by Bishop Fothad in the tenth century, still remained for the admiration of all on the high altar of St Andrews in his day. But these, and all other "books of the Picts," of which scattered notices have come down to us,² have perished, and the only manuscript of the early Church in Scotland left to us is the Book of Deer, which "may have been written by a native scribe of Alba" in the ninth or tenth century.³ Its art is exceedingly poor, but its characteristics are those of the Irish school, of which Deer was an early foundation.

But we do not find in the manuscripts a single representation that can be correlated with the conventional symbols of the earlier Scottish monuments. Nor do we find in the Celtic illuminated manuscripts of the Gospels any clear traces of that other system of symbolism which covered the decorated monuments of Class II. with symbol-pictures of real and imaginary beasts. The art relations of these monuments, so far as their decoration is concerned, are with the Irish manuscripts of the Gospels, but so far as their symbolism is concerned, they are more with the manuscripts of the Bestiaries, and though there have been many Celtic manuscripts of the Gospels preserved, no Celtic manuscript of a Bestiary is known to exist, although we have reason to believe, from citations in the *Leabhar Breac*, the Book of Armagh, and the legend of St Brendan, that Celtic manuscripts of the Bestiary must have existed.⁴ Even the symbolism of the cross as applied to the monuments—a great cross of the whole length of the slab profusely decorated—is not found on the decorated pages of the manuscripts; while the cross with the crucified figure which occurs in the manuscripts is never found on the monuments of Class II., though almost every monument presents a decorated cross as its principal device.

¹ *Proceedings of the Society of Antiquaries of Scotland*, vol. ii. p. 264.

² The *Legend of St Andrew* has this colophon:—"Thana, son of Dudabrach, wrote this for King Pherath, son of Bergeth, in the town of Meigle," and the copyist of this and other legends into the Register of St Andrews in the middle of the twelfth century adds:—"These things we have transcribed as we have found them written in the ancient books of the Picts."

³ *The Book of Deer*, edited for the Spalding Club by John Stuart, LL.D., 1869.

⁴ Miss Stokes, *Early Christian Art in Ireland*, p. 131; Sir Samuel Ferguson, *Ogham Inscriptions in Ireland, Wales, and Scotland*, p. 147.

It is different when we come to trace the art relations of the monuments with the metal-work, ecclesiastical and secular, of the period of the early Celtic Church in Scotland, for we find that not only is the style of decoration so characteristic of the manuscripts common also to both monuments and metal-work, but the symbols of the monuments which are absent from the manuscripts appear also on the metal-work.¹

A remarkable hoard of silver ornaments found at Norries Law, near Largo, in Fife,² exhibits distinct and unmistakable art relations with the monuments and equally distinct relations with the older art of the pre-Christian time. Unfortunately only a portion of the hoard is now known to exist, the greater part having been sold and melted down. What was left is now preserved in the National Museum, and consists of two large penannular brooches without pins, unornamented and finished with the hammer, a spiral finger ring, three long pins with projecting semicircular heads like that shown in fig. 13, two oval-shaped plaques exactly similar to each other, of which one is shown in fig. 13, several portions of thin silver plate cut into irregularly shaped pieces and bearing bosses and spirals hammered up from the back, and a large quantity of small broken fragments of plate, some of which have chased or engraved ornament.

The portions of the hoard that exhibit the closest relations with the monuments are the oval plaques and the long pins. The plaques have each a raised boss at one end ornamented with curved and radiating lines. A marginal line following the outline of the plaque surrounds the field, in the centre of which is deeply and finely engraved the symbol of the double disc with the zig-zag rod. The rod is floriated in the manner usually seen on the monuments, and the discs of the symbol are filled with a very beautiful pattern of triple connecting spirals. This ornamental filling of the discs of the symbol is common on the monuments of Class II. but is not found on those of Class I. Under the double disc on both plaques is another symbol which occurs repeatedly on the monuments of Class II.—the beast bust. On the semicircular heads of the pins the same ornament of the triple connecting spiral occurs, and there are indications that both these and the symbols on the oval discs have been filled with enamel, as is the case with other pins of the same form found in other places.³ The heads of the Norries Law pins are surmounted with three cylindrical knobs or projections, the two side ones being rounded and the middle

¹ This, of course, does not apply to the metal-work of the same period in Ireland, which like the manuscripts exhibits the same characteristic decoration, but in no case has shown any of the conventional symbols.

² *Proceedings of Soc. Antiq. Scot.*, vol. xviii. p. 239; Stuart's *Sculptured Stones of Scotland*, vol. i. pl. 131; *Scotland in Early Christian Times* (second series), p. 35.

³ One found in Urquhart, Elginshire, is figured in the *Proceedings Soc. Antiq. Scot.*, vol. x. p. 359; another from the Petrie Collection in the Royal Irish Academy is figured in their *Transactions*, vol. xxx. pl. 19.

one flat in front. On the flat part is an equal armed cross within a circle, the arms expanding towards the extremities. On the reverse of the head of one of the pins is

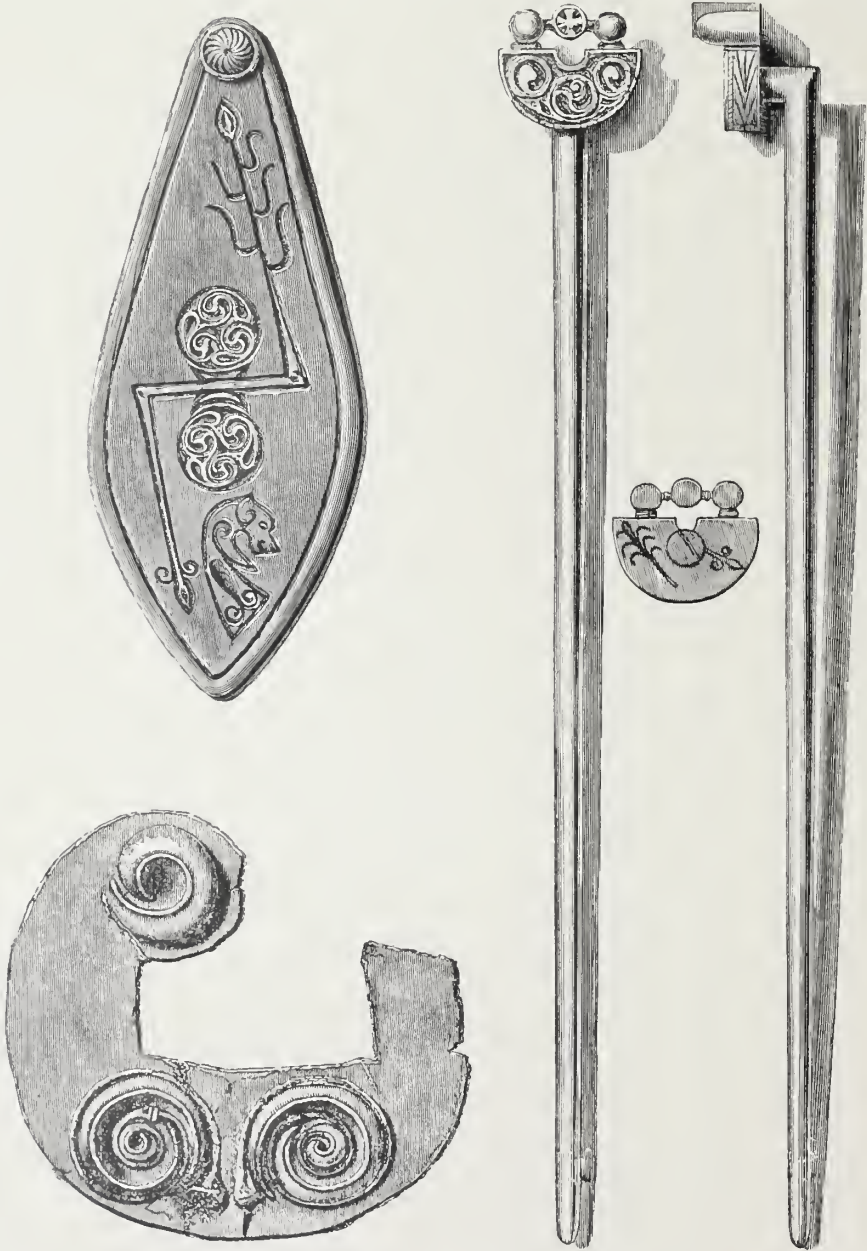


Fig. 13.—Silver ornaments from the hoard at Norries Law, Largo. †.

engraved a figure resembling the double disc symbol with the floriated rod, but incomplete. This is shown in the woodcut between the stalks of the figures of the

front and side views of the pin in fig. 13. Round the edge of the semicircular head of the pin is an engraving resembling the palm-branch so often seen on earlier Christian monuments, though it does not occur again in Scotland except upon the ornamented finials of the Monymusk Reliquary.

In the sand-pit in which these silver articles were found there were also found at the same time a number of Roman coins ranging in date from the first to the seventh century, the latest,¹ of course, representing the approximate date of the hoard—if the



Fig. 14.—Bronze crescentic plate with symbols found at the Laws, Monifieth. 3.

presence of the coins in true association with the rest of the articles may be relied on. The period of these silver ornaments is therefore nearly that of the Gospels of Lindisfarne, and the character of the art on the oval silver plaques corresponds fairly with this idea.

¹ It is a much defaced coin of the Byzantine series assigned to Tiberius Constantine, who died A.D. 682.

The symbol of the double disc having its discs filled up with spiral ornamentation also occurs on a crescentic plate of thin bronze (fig. 14), of which all that we know is derived from a drawing made in 1796, and bearing a memorandum to the effect that the plate was found in a brooch-like structure at the Laws in Monifieth parish, near Dundee. The symbol is in this case also accompanied by the beast bust. Both are in the main similar to the representations on the silver plaques from Norries Law, though somewhat different in the treatment of the details. On the other side of the plate is one of the other principal symbols of the monuments—the crescent crossed by the V-shaped rod floriated at the upper extremities. In this case the body of the crescent is filled with a pattern of small sunk squares arranged diagonally, each square having a dot in the centre. On the border at one end is a T-shaped fret, and on both sides there are double spirals at the terminations of the border lines. The relations of this bronze plate, so far as its ornamentation and symbolism are concerned, are thus also with the monuments of Class II.¹

We meet again with the peculiar symbols of the monuments on the terminal rings of a series of massive silver chains of double links, the use of which is unknown. They have been found in various parts of Scotland, from Inverness-shire to Dumfriesshire, but no example is known out of Scotland. They are all constructed on the same principle as a chain of double circular links, the links being formed of cylindrical rods bent round till the ends fit closely together. Each chain has a single terminal ring of peculiar shape, penannular, and flattened with projecting flanges round the outside. It is on the flat part of this terminal ring that the symbols are incised (fig. 15). Six

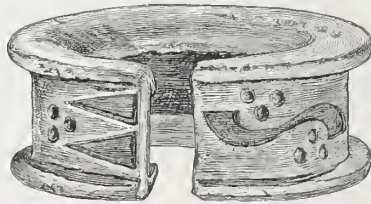


Fig. 15.—Terminal ring of silver chain found at Parkhill, showing symbols. †.

of these chains are recorded as having been found in Scotland. Of these in two cases the terminal rings are wanting, two have the terminal rings plain, and the other two have incised symbols.

The chain found at Parkhill in the parish of New Machar, Aberdeenshire (fig. 16), consists of twenty-three pairs of plain rings and the large terminal penannular ring.

¹ The drawing shows some letters of an inscription in runes on the margin of one side of the plate, a circumstance not unparalleled with respect to objects in Celtic metal-work, as for instance the Hunterston brooch, on the back of which are recorded the names of two of its possessors in the runic alphabet peculiar to the Western Hebrides and the Isle of Man. Professor Stephens in *Ayr and Wigton Archaeological Collections*, vol. i. p. 76.

Its whole length is $17\frac{1}{2}$ inches and its weight 39 oz. 15 dwts. The rings are all the same size, $1\frac{1}{4}$ inches in diameter and $\frac{1}{4}$ of an inch in thickness, except the last pair, which are slightly larger, just large enough to admit of their being slipped through

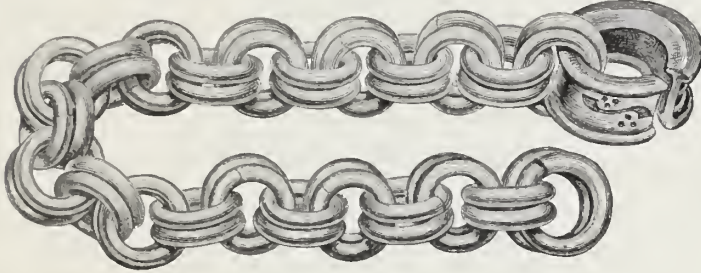


Fig. 16.—Silver chain found at Parkhill, Aberdeenshire.

the opening of the terminal ring one after the other, and when once in they remain until they are released one after the other. The symbols on the terminal ring are, on one side of the opening, the doubly curved or S-shaped symbol and two triplets of dots, and on the other side of the opening two triangles and a triplet of dots. These figures are deeply cut into the metal and still show traces of having been filled with red enamel.

The chain found at the Whiteleuch, Lanarkshire, consists of twenty-two pairs of rings and a penannular terminal ring, its total length being 20 inches and its weight 62 ozs. 12 dwts. Its rings are all the same size, $1\frac{1}{2}$ inches in diameter and $\frac{1}{4}$ inch in thickness, except the last pair, which are $1\frac{3}{4}$ inches in diameter, apparently to admit of their being passed through the opening and slipped on to the terminal ring as noticed in the case of the previous chain. The symbols are incised on the terminal ring (fig. 17), as in the former instance, on either side of the opening. On the one side



Fig. 17.—Terminal ring of silver chain found at Whiteleuch, showing symbols. 4.

is the double disc symbol with the doubly bent and floriated rod, the discs being filled with a double spiral pattern. On the other side is the rectangular symbol with a rectangular opening in the lower end and two circular openings from opposite sides above. This symbol, when it occurs on the monuments, usually stands with the open end down, so that it is here laid on its side, doubtless in conformity with the space. In all probability the deeply incised figures have in this case also been filled with enamel though there is now no trace of it left.

The use of enamel for surface decoration descended to the Christian metal-

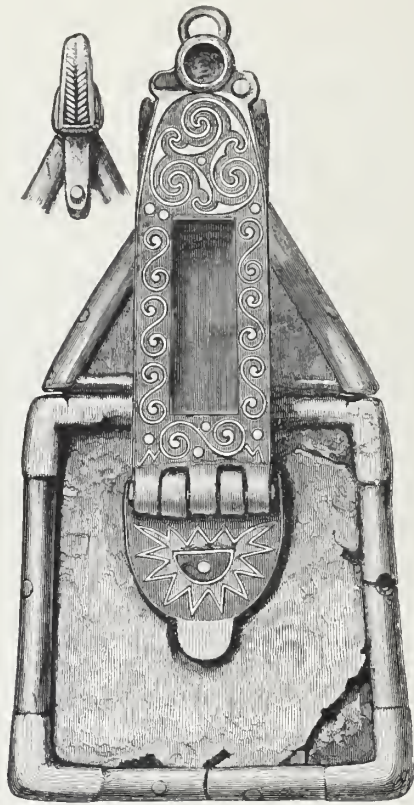


Fig. 19.—End of the Monymusk reliquary showing enamelled decoration.

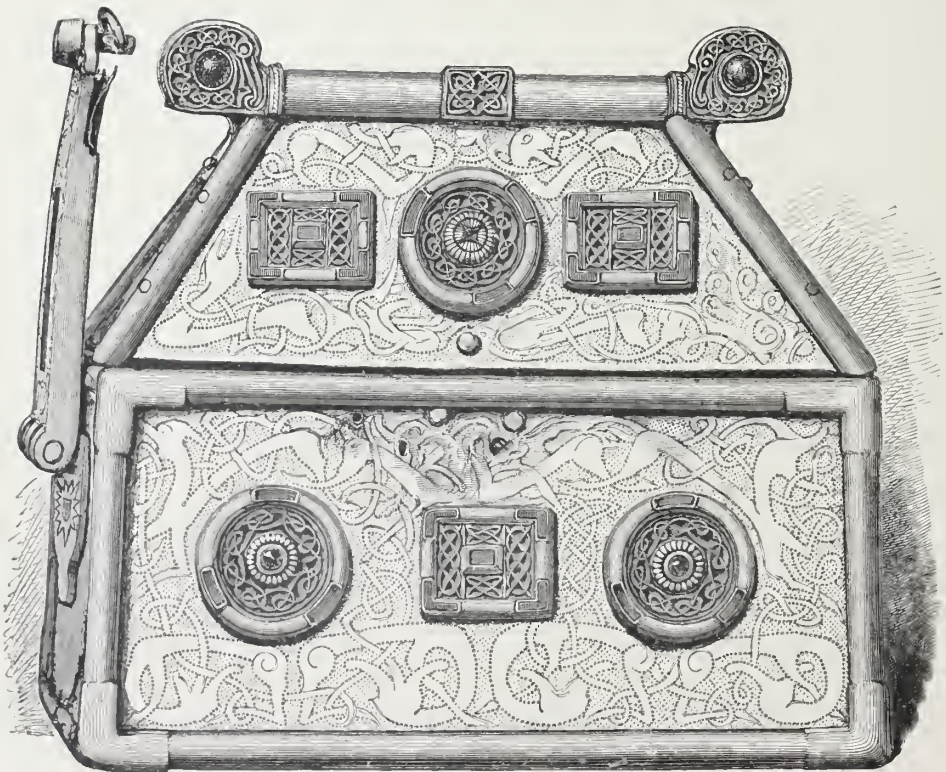


Fig. 18.—The Monymusk reliquary. Front view. 1.

workers directly from the Celtic enamel-work of the Pagan period. We have one example of the enamel-work of the Christian period in the Monymusk reliquary, the most beautiful of all the ecclesiastical relics which exhibit art relations with the monuments. Nothing is known of its history, except that from time immemorial it has been preserved at Monymusk. Some reasons have been adduced for the probability of the view that it may be the Breebennoch of St Columba,¹ which was one of the chief vexilla or sacred relics borne into battle with the host of Alba, as the Ark of the Covenant was borne before the host of Israel. We know that the Breebennoch, like other Celtic ecclesiastical relics, had an endowment of lands for its hereditary keepership, and that these lands of Forglen with the Breebennoch were bestowed by King William the Lion on the abbey of Arbroath. It is also on record that in the early part of the fourteenth century the abbot and convent of Arbroath gave these lands to Malcolm of Monymusk on condition "that he and they shall perform in our name the service in the king's army which pertains to the Breebennoch as often as occasion shall arise." The reliquary (fig. 18) is clearly a relic of the early Celtic Church, having all the typical characteristics of the reliquaries of that Church and time.² It is a small box of wood hollowed out of the solid, and enclosed in a framework of bronze, which keeps in place the plates of silver that cover it. The plate on the front is covered with lightly engraved patterns of zoomorphic interlaced-work, the contorted bodies, tongues, tails, and top-knots of the beasts interlacing as a diaper all over the field. The lid of the box slopes upward like a roof, and is also covered with a silver plate similarly ornamented. In the centre line of both these plates there are projecting panels, on the lower plate a square panel in the centre and a circular one on either side, and on the upper plate a circular panel in the centre and a square one at either side. Each panel has a jewelled centre with a pattern of interlaced-work filling the space round it, and the raised border is decorated with enamels. Like other Irish reliquaries, it has hinged to its ends appliances for the insertion of the ends of a strap to go round the neck of its bearer, so that it should be borne on the breast.³ These hinged appendages are of bronze, and are beautifully enamelled with spiral pateras (fig. 19). The style of these enamels, both in the manner in which

¹ *Scotland in Early Christian Times* (first series), pp. 241-250.

² A shrine or reliquary of precisely the same form found in Lough Erne in 1891 is similarly ornamented with projecting discs on the front, and has at one end the remains of a similar hinged appliance for the chain or strap by which it could be carried. It is described and figured in the *Proceedings of the Royal Society of Antiquaries of Ireland*, vol. ii., fifth series, 1892, p. 350.

³ O'Donnell's description of the Cathach, a reliquary which contained the Psalter of St Columba, and was used as the *vexillum* of the tribe of the Cinel Conaill, says:—Now the Cathach is the chief relic of Columcille in the territory of Cinel Conaill Gulban, and it is covered with silver under gold; and it is not lawful to open it; and if it be sent thrice right-wise around the army of the Cinel Conaill when they are going to battle, they will return safe with victory, and it is on the breast of a coarb or a cleric, who to the best of his power is free from mortal sin, that the Cathach should be when it is brought round the army.

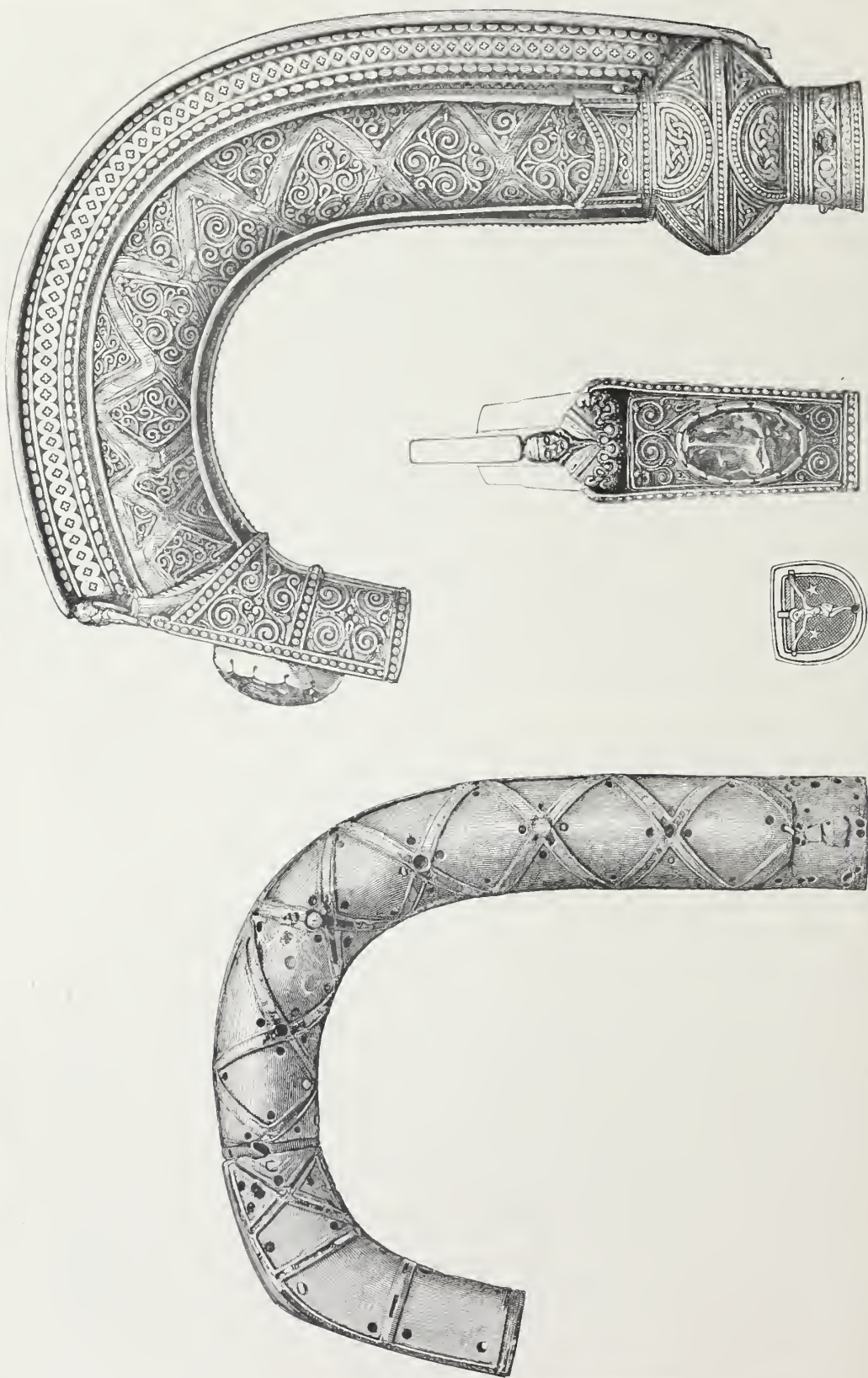


Fig. 20.—St Fillan's erosier. The figure to the left is the older erosier, which was enclosed in the ornamented ease of which side and front views are given in the figures to the right. $\frac{1}{2}$.

they are inlaid in the metal and in the scheme of colours in which the characteristic spiral designs are carried out, is a distinct survival from the old system of Celtic enamelling of the Pagan time.¹

Two other Scottish ecclesiastical relics present examples of the use of niello in their decoration. The portion that has been preserved of the crosier found at Hoddan is a mere fragment, but it exhibits characteristic patterns of the later style of interlaced-work carried out in niello. The raised bands enclosing the lozenge-shaped spaces on the older crosier of St Fillan are also carried out in niello. These lozenge-shaped spaces were originally filled by the silver plaques ornamented with filigree-work² which we now see on the exterior casing or shrine of the crosier (fig. 20), a work apparently of various dates down to the time of King Robert the Bruce,³ but showing on its bulb a series of interlacing designs disposed in panels in the manner characteristic of the Celtic style, and round the collar of the bulb a foliaceous scroll.

There is also a class of objects, not necessarily ecclesiastical, which have in the character of their decoration very manifest relations with the art of the monuments.



Fig. 21.—Two mountings of bronze found at Crieff. 1.

¹ Mr Franks observes :—"The ancient processes seem to have lingered in Ireland, as we find some of the details of the earlier shrines executed in enamel," and Miss Stokes enumerates the bell-shrine of Maelbrigde, the shrine of St Mogue, the shrine of St Molash, the shrine of St Manchan, the Ardagh chalice, and the Cross of Cong as showing enamels in their decoration, while the crosier of Lismore adds niello to the usual enamels. *Transactions of the Royal Irish Academy*, vol. xxx. p. 292.

² The crosier of Dysert, now in the Museum of the Royal Irish Academy, was similarly ornamented by plaques of gold riveted into the lozenge-shaped spaces. It is described and figured in the *Proceedings of the Royal Society of Antiquaries of Ireland*, vol. iv., fifth series, 1895, p. 339.

³ See the description and history of the crosier in *Scotland in Early Christian Times*, pp. 216-241.

Some of these may have been the mountings of shrines, but the others are either articles of personal adornment or personal use.

Two mountings of bronze¹ (fig. 21), gilt and enriched with settings of coloured glass and amber, found at Crieff, show beautiful examples of the early spiral-work, with zoomorphic terminations to the spirals, and almond-shaped bosses placed singly or in triplets in the spaces, as seen in the metal-work of the pre-Christian time, in the decorated pages of the Book of Durrow, and in similar patterns on the monuments, notably in the fragment from Rosemarkie, No. 7.

Another fragment of a mounting of bronze inlaid with gold (fig. 22), which was found in a mound of ruins called the Monker Green, at Stromness, has a peculiar rendering of the running seroll of foliage, with birds or beasts lodging in the circles



Fig. 22.—Bronze mounting inlaid with gold found at Stromness. 1.

of the seroll. In this case the bodies of the birds are curiously conventionalised into a development of the divergent spiral pattern, with spirals at the junction of the wings and the almond-shaped separations between the trumpet-shaped endings of the spirals. Compare also the border ornament of crescents and almond-shaped prominences common to both of the Crieff mountings and the fragment from Stromness.

A hoard of penannular brooches and other articles (fig. 23) found at Croy in Inverness-shire in 1875 is valuable in this respect, that, being accompanied by two coins of Coenwulf, King of Mercia (A.D. 785–818), it gives a starting point in the chronology of the series. Of the three brooches found, two show interlaced-work in an incipient stage, while the ornamentation of the third is composed of a triquetra and a border of S-shaped spirals in filigree-work of notched wires of gold implanted on a thin gold plate. This border surrounds a central setting of a triangular shape divided into eleven small compartments by raised ridges of gold, these compartments being filled with variously coloured settings. With the brooches were found, in addition to the two coins, an amber bead and two beads of glass, one of which is enamelled on the surface with connecting spirals. A small balance-beam of bronze,

¹ A similar mounting in the Museum of the Royal Irish Academy is figured in Jewitt's *Grave-Mounds and their Contents*, p. 262.

and a band, 6 inches in length, of knitted silver wire in the manner of Trichinopoly work, complete the find.

The same ornamentation of a border of **S**-shaped and **C**-shaped spirals in filigree-



Fig. 23.—Silver brooches, coins of Coenwulf, and portion of a band of knitted silver wire, found at Croy, Inverness shire. $\frac{3}{4}$.

work of gold wires, notched, and implanted on a thin gold plate round a triangular panel, in which is a beast-motive of filigree-work of a similar kind with the body beaded, is found on the fragment of a silver brooch found at Dunbeath in Caithness (fig. 24). It has been enriched with settings of amber.

The same style, but carried out in another manner, is seen in the decoration of



Fig. 24.—Portion of silver brooch with gold filigree-work found at Dunbeath. 1.

the bronze brooch found in Mull (fig. 25), which has also been enriched by settings of

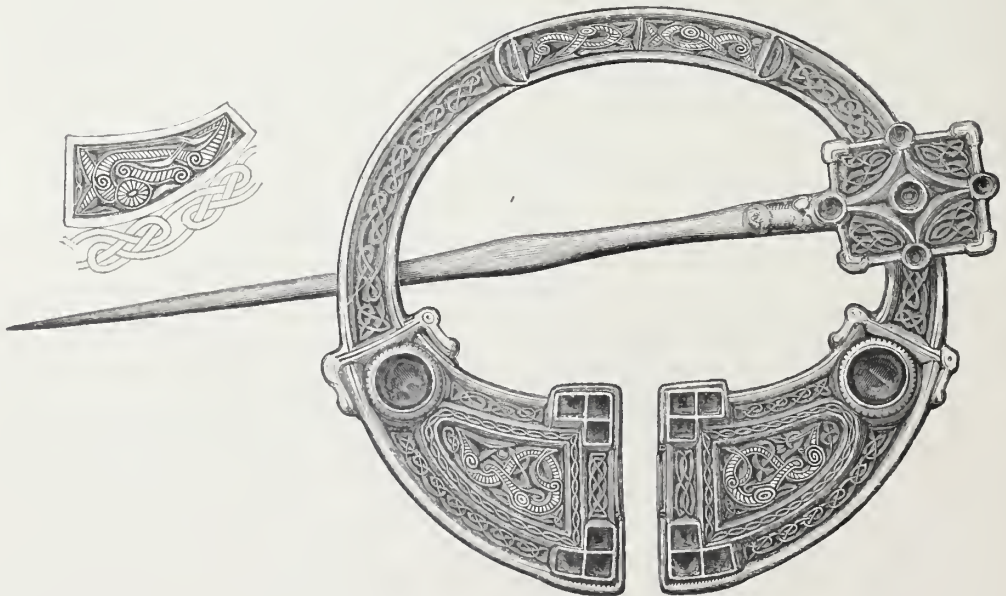


Fig. 25.—Bronze brooch found in Mull. 3.

amber or coloured glass. In this case the interlaced ornament and beast-motives are cut down into the metal, or, as it were, sculptured in relief on the surfaces of the

panels, which are themselves sunk in the framework forming the outlines of the shape of the brooch. The patterns of the interlaced-work and the beast-motives, with spirals at the junctions of the limbs with the body, are quite analogous to those of the earlier manuscripts and of the monuments.

The same sculpturesque style of ornamentation is presented on two silver brooches found at Rogart, in Sutherlandshire (fig. 26). The smaller, in its size and shape, recalls the Croy brooches, though much more richly ornamented, and the larger is a remarkable example of the boldness, beauty, and elaborate intricacy of design and execution of the silversmith's work of the time. The body of the brooch is a

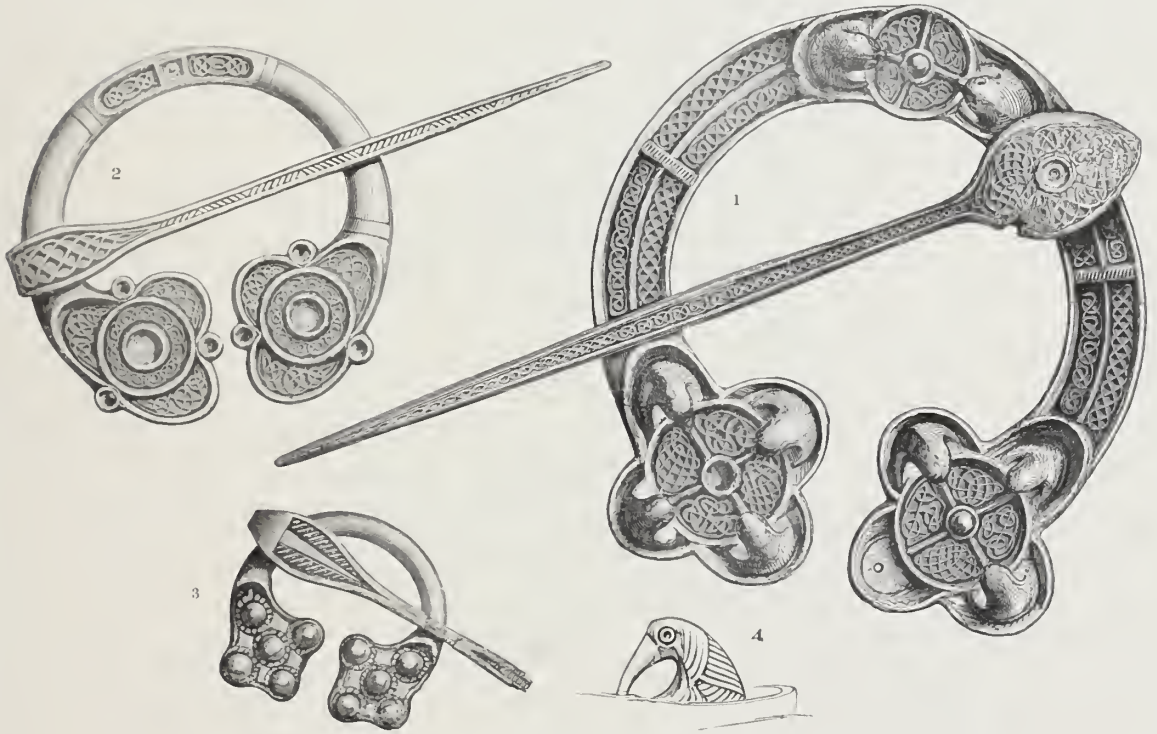


Fig. 26.—Two silver brooches and small bronze brooch found at Rogart, Sutherlandshire. $\frac{3}{4}$.

flattened band of silver, three-quarters of an inch in width, bent into a penannular or slightly horse-shoe shape, and terminating at the extremities in circular expansions of the band. Round this circular expansion are four semicircular panels separated from each other and from the central circular panel by raised borders. The circular panel has an amber setting in the centre, and is intersected by four partitions dividing it into quadrants, each of which is filled by a thin plate of gold, on the surface of which is a tooled pattern of interlaced-work of great beauty and delicacy. From each of the four semicircular spaces or panels arranged round the circle there

rises the neck and head of a broad-billed bird, the eyes of which are set with green glass. On the middle of the curve of the band opposite the opening between the expanded ends of the brooch there is a similarly enclosed circular panel similarly divided into quadrants, and having a setting of amber or glass in the centre, into which in the same way two birds' heads dip their bills. Each side of the curved part of the brooch between this central portion of the band and its expanded extremities is divided into four sunk panels filled with symmetrically alternating patterns of interlaced-work. The pin of the brooch expands into an oval head with a central setting, and round it a pattern of intricately worked interlacements continued with changes in the pattern down the whole front of the pin. The brooch thus presents twenty-one different panels of interlaced-work on gold plates, or sunk in the metal and plated with gold, ten panels occupied by birds' heads, and twenty-four settings of amber or glass.

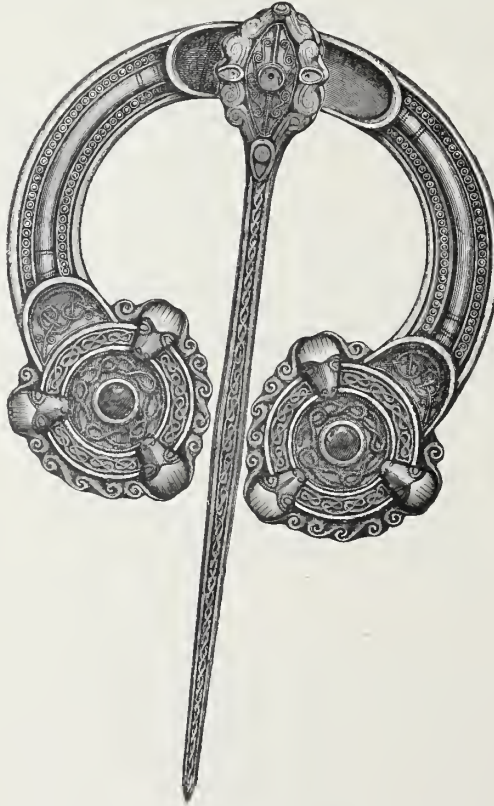


Fig. 27.—Silver brooch found near Perth. $\frac{2}{3}$.

An intermixture of the two varieties of decoration in filigree-work, and cut down into the surface of the metal, is seen in the case of a brooch (fig. 27) found in the neighbourhood of Perth. It is of the same type as the larger of the Rogart



Fig. 28.—The Hunterston brooch found at Hunterston, Ayrshire. Front and back. $\frac{3}{4}$.

brooches, with circularly expanding terminations to the band, and the circles divided into equal parts by three beasts' heads, the centres being enriched with settings of amber. The ornamentation in the inner circle and in the half-circles at the end of the band is of filigree-work in gold wire implanted on thin plates of gold.

In the Hunterston brooch (fig. 28) the front is entirely in filigree-work of beast-motives except the border round the central panel on the head of the pin, while the sides and the back are decorated in interlaced-work and triple diverging spirals with zoomorphic central arrangements of three beasts' heads with their mouths grasping each other symmetrically, a form of spiral centre found frequently in the manuscripts, and occasionally also on the monuments.

There are other articles in other materials which exhibit similar art relations with the monuments. Wood is such a perishable material that it is only in very excep-



Fig. 29.—Wood-carver's tool-box found in a moss at Birsay, Orkney. 4.

tional circumstances that carvings of the early Middle Ages have been preserved. But in one fortunate find in Orkney an example of wood carving in this early style has been obtained, the preserving agency being a peat moss. Mr J. W. Cursiter, F.S.A. Scot., has communicated to the Society of Antiquaries¹ a description of the find of a wood-carver's tool-box and tools in a moss at Birsay in 1885. It is decorated on two sides and one end with patterns of connecting spirals which have obvious relations with many of those used alike in the manuscripts and on the monuments.

Another very beautiful example of carving in a more durable material which has yielded other examples of this style and period, though not in Scotland, is found in the small casket of cetacean bone (figs. 30, 31), which exhibits about a dozen varieties of

¹ *Proceedings of the Society of Antiquaries of Scotland*, vol. xx. p. 47.

interlacing patterns, nearly all of which are found either in the manuscripts or on the monuments.

Briefly, then, it appears that the style of art which we find prevailing in the British Islands prior to the Roman occupation and the advent of Christianity was characterised by a peculiar and almost exclusive use of the diverging spiral. In its earlier phase in Scotland it is confined to metal-work, on which it is associated with a system of decoration by means of enamels which is peculiar to the British Isles.¹ Before this early style of ornament had quite passed away, the peculiar symbols of the monuments are found upon its metal-work. On the monuments the symbols are subsequently found associated with new varieties of decoration common to the manuscripts of the Gospels, in which the earliest dated or approximately dated examples of the use of interlacing patterns and frets are found, and in which also the old colour schemes of the enamels on the metal-work have been rivalled by adaptations of colour to the much more elaborate and beautiful designs developed from the more varied

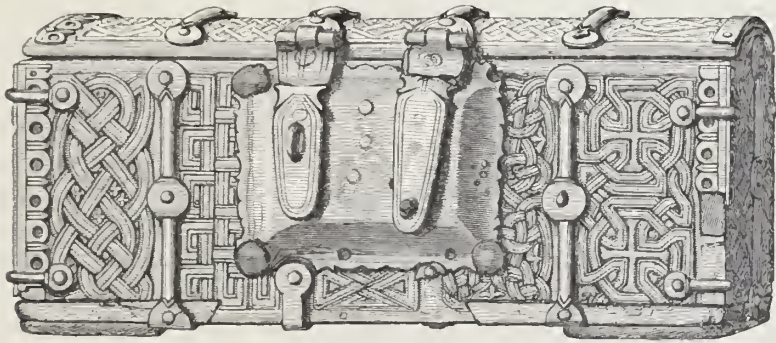


Fig. 30.—Front of casket of cetacean bone. $\frac{1}{2}$.

elements of the new style. Occasionally, as on the Monymusk reliquary, we find the older spiral patterns enriched with enamels so associated with these new systems as to give direct evidence of the continuity of the old system with the new, and to show conclusively that the Celtic art of the Pagan time passed into the style of the Christian period and gave it much of its distinctive character.

The other elements of the interlaced and fretwork patterns and zoomorphic and foliageous ornament which the Christian art grafted on the old stock are not in them-

¹ As to the external relationships of the so-called "Late-Celtic" style, it has long been known that among the Iron-Age remains of Central Europe there are certain manifestations of the ornamentation, chiefly on sword-sheaths, which seem to show an incipient or elementary relationship to the fully developed system as it appears in the British Isles, where the sword-sheaths are of the same character. But, on the other hand, the mirrors decorated with divergent spiral patterns, the massive armlets with enamelled settings, and the horse-trappings and enamelled harness mountings in bronze are peculiar to the British area. And whatever may be the significance of this apparent external relationship as indicative of the remoter sources of the elements of the style, there can be no question that it was nurtured and brought to maturity within the British area over which its manifestations are so widely diffused.

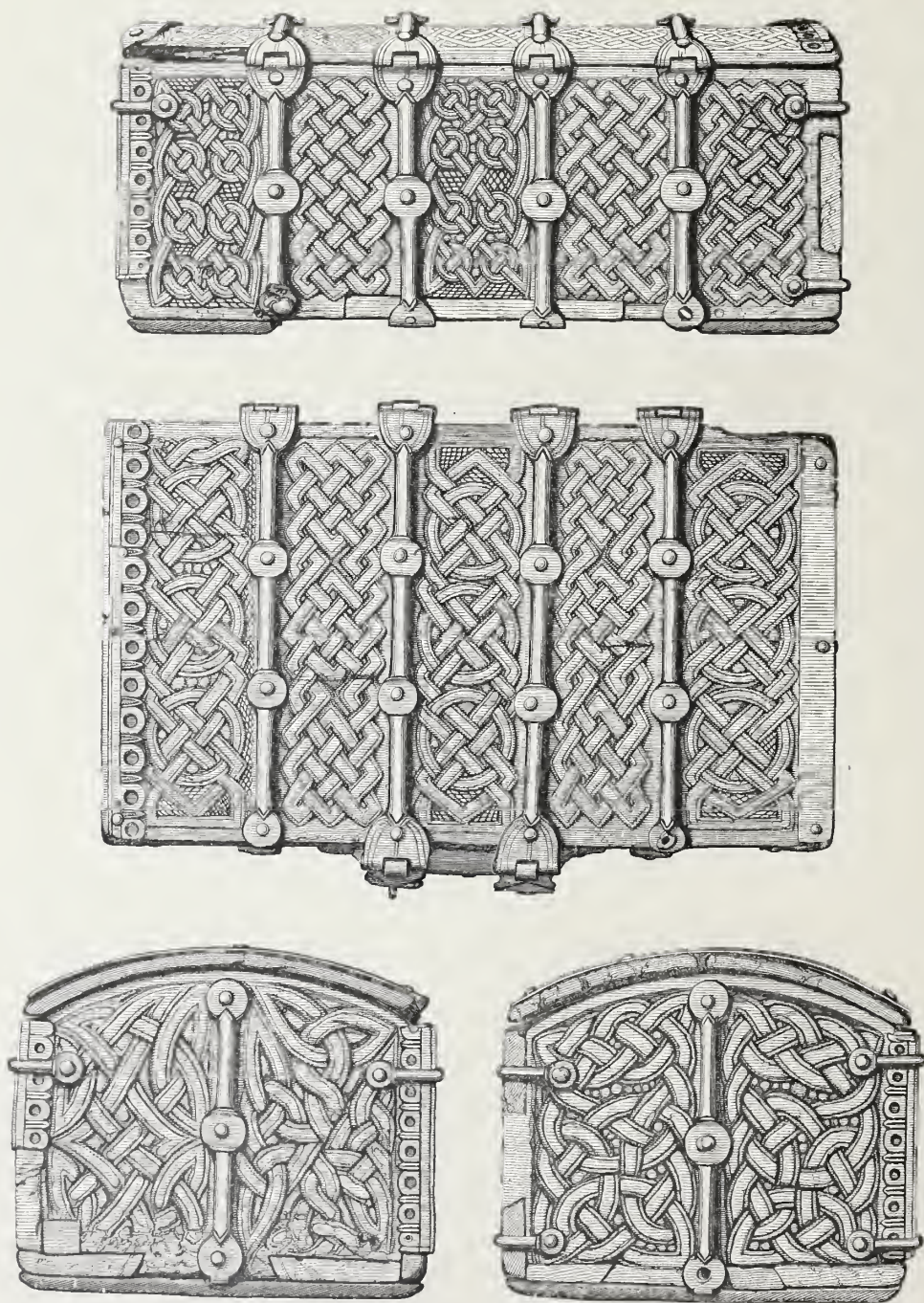


Fig. 31.—Back, lid, and ends of the casket. $\frac{1}{2}$.

selves specially characteristic of any particular race or area, and consequently may have been originally derived from extraneous sources, or may have been developed locally and independently here, as they have been developed in other times and other areas widely separated from each other. A system of decoration with patterns of knot and plait-work is found in the early ecclesiastical architecture of Italy.¹ But this architectural interlaced-work differs as distinctly from the Celtic interlaced-work as that differs from the Scandinavian,² Merovingian, and Burgundian interlaced-work on metal, which is characteristic of their late Iron Age and early Christian periods. Of course, in all these different styles the patterns, as such, are to a certain extent the same. But patterns are not art any more than words are poetry, or sounds are music. It is the methods of their selection and adaptation and combination that make a style, and the application of that style generally to the purposes of decoration constitutes a phase of art. The phase of Celtic art with which we are here concerned is marked by its application to the decoration of manuscripts and metal-work, to carving in wood and bone, and to sculpture in stone—in other words, to all the purposes of ecclesiastical and secular art to which a decorative style is usually applied. And from whatever source or sources the different elements of the composite style of decoration of the Celtic Christian period may have been derived, the style itself belongs specially to the period of the early Celtic Church in Scotland, Ireland, and Wales, with distinctively characteristic developments in each of these separate areas, and a modified extension into the area of the early Saxon Church, especially in Northumbria. In each of these areas it produced a remarkable development of monumental sculpture, and whether we regard the whole series of their manuscripts, metal-work and monuments collectively as one great comprehensive manifestation of Celtic ornamentation of the early Christian period, or take them separately as national developments of a common style, it is equally true that, considering the work and the time, it presents a manifestation of artistic culture altogether unparalleled in Europe.

¹ Interlaced-work, both of broken and unbroken plaits, was not uncommon in the sculptured decoration of the churches of North Italy, occurring chiefly on the archivolt of ciboria and marble panels of the screens surrounding the choir. While there is much confusion as to the precise dates of these remains, there is no great difference with regard to the period in which they are to be included, ranging from the eighth to the eleventh centuries. Some are dated by their inscriptions, as the ciborium of St George's of Valpoliceella, now in the Museum at Verona, which has the pattern No. 568, and is dated A.D. 712; the fragment at Cividale assigned to A.D. 737, which has the pattern No. 658; the parapet of the stair of an ambo in St Saviour's, Brescia, which has a fine example of the pattern No. 647, about A.D. 753; the ciborium of St Eleucadius in St Appollinaris-in-classe at Ravenna, A.D. 806-816; and the marble slabs found placed with their carved faces down in the floor of San Abbondio at Como, which are also assigned to the ninth century. Cattaneo's *Architecture in Italy from the Sixth to the Eleventh Century*, London, 1896.

² For the influence of Irish art on the art of Scandinavia, see Muller's "Nordisk-Irsk Ornamentik, Dyrornamentiken i Norden," *Aarbog for Nordisk Oldkyndighed*, 1880, p. 288, and compare Vedel on the introduction of the Irish style into Bornholm, in the *Aarbog*, &c., 1890, p. 41.

VI.—GEOGRAPHICAL DISTRIBUTION AND CONCLUSIONS.

In discussing the questions connected with the geographical distribution of the monuments, it is necessary for purposes of comparison to subdivide the general area into a series of geographical sections, each containing an area sufficiently large for average results. These areas may be defined either by natural or historical limits, or by simple grouping of several counties in geographical juxtaposition.

Taking the divisions adopted by Mr Romilly Allen, we have in the northern section a group of four counties—Caithness, Sutherland, Ross, and Inverness—and with them we include the outlying islands of Orkney, Shetland, and the Northern Hebrides. In this northern section there are 78 monuments on 56 sites. Taking the group of four counties lying next to them southwards on the eastern side, and calling it the north-eastern section, which includes the counties of Nairn, Elgin, Banff, and Aberdeen, we have 97 monuments on 55 sites. Taking next the group of five counties of Kincardine, Forfar, Perth, Fife, and Kinross, which forms the eastern portion of the central part of Scotland, and is therefore called the east central section, we have in it 191 monuments on 75 sites. The western portion of the central part of Scotland, which is separated from the eastern by the range of mountains anciently known as Drumalban, includes Argyle and Bute and the Southern Hebrides. Here we have a total of 25 monuments on 13 sites. These four sections include the whole of Scotland north of the Forth.

South of the Forth the country naturally divides itself into two sections—the south-eastern section including the seven counties of Linlithgow, Midlothian, Haddington, Berwick, Selkirk, Roxburgh, and Dumfries, in which we have 30 monuments on 18 sites; and the south-western section including the six counties of Dumbarton, Renfrew, Lanark, Ayr, Wigton, and Kirkcudbright, in which we have 77 monuments on 25 sites.

Now the most obvious result of a comparison of these areas with each other is that the three divisions comprising the district of Scotland lying north of the Forth and east of Drumalban have each a much larger number, both of monuments and sites, than the three divisions lying west of Drumalban and south of the Forth. Not only so, but of all the six sections, that which lies west of Drumalban, and includes Iona and Argyle—the special area of early Irish influence—has much the smaller number both of monuments and sites; while the area lying between the Dee and the Forth has much the largest number. There is, therefore, no question of these two important facts:—(1) that the area of the greatest development of the monuments lies between the Forth and the Dee; and (2) that the area of their least development lies west of the range of Drumalban, and includes the region first colonised from Ireland and most affected by Irish influence. But this generalisation refers to the whole number

of the monuments of all classes regarded as a single group, and takes no account of the relative distribution of the different classes or of their sequence in time.

But on proceeding to investigate the geographical distribution of the monuments according to their classification, we obtain more definite results. First, it is noticeable that all the three classes of monuments are represented in considerable, though unequal, numbers in all the three divisions of the un-Romanised section of the country extending from the Forth northwards, on the eastern side. Now, let us cross the range of Drumalban into the fourth section—the region of country lying nearest to Ireland, colonised from Ireland, and for many centuries the most exposed to Irish influence—and what do we find? In that region, comprising the whole of Argyle, Bute, and the Southern Hebrides, there are no monuments of Class I. or of the transition type of Class II.; while of Class III. there are but 25 monuments on 13 sites.¹

Let us now look at the two southern sections of country lying south of the Firths of Clyde and Forth. In all that region there are no monuments of Class I. or of Class II., with the exception of a single straggler of Class I. found in the West Princes Street Gardens, Edinburgh, under the Castle Rock. But while in this southern area there are no monuments of Class I. or Class II. there are 106 monuments of Class III. on 42 sites.

Thus the remarkable fact appears that Scotland is divided into two monumental areas—one lying east of Drumalban and north of the Forth, which contains monuments of the whole three classes, and the other lying west of Drumalban and south of the Forth, which contains monuments of the third and latest class only.

Again, another outcome of this comparison of areas is that the monuments of the earliest type (Class I.) are most abundant in the district of country lying between the Beaully Firth and the River Dee; that they are less numerous in the region lying to the north of Beaully Firth, and least numerous in the region lying to the south of the Dee and between it and the Forth. In other words, the principal area of the type of Class I. is in the north-eastern division, and from it they extend in a diminishing ratio northwards and with still greater diminution southwards till they cease entirely at the Forth.

It is different with Class II., which consists of monuments sculptured in relief with symbols and Celtic ornament. This, as we have seen, is the transition type between Class I. and Class III., and its principal area is in the east central division, or the district lying between the Dee and the Forth. While the monuments of this type extend northwards in a diminishing ratio into the principal area of Class I. and

¹ In the present investigation the monumental slabs and crosses of the period from the twelfth and thirteenth centuries to the Reformation are not included. For a series of beautiful drawings of them, see Drummond's *Sculptured Slabs and Crosses of Iona and the West Highlands*, and R. C. Graham's *Sculptured Stones of Islay*.

beyond it, they neither extend across the Drumalban range westward, nor across the Forth southward.

It appears, moreover, that although Class I. and Class II. are thus practically conterminous in their areas of general distribution, the areas in which they occur in greatest abundance, or their principal areas, are different; and what is perhaps of more significance, the area of the greatest abundance of the one is also that of the least abundance of the other. To translate this into topographical fact, the area covered by both classes of monuments is the mainland of Scotland from the Forth northwards, excluding Argyle and the Southern Hebrides or the region lying west of Drumalban. The area of the greatest abundance of Class I. is Aberdeenshire, which is also the area of the least abundance of Class II. The area of the greatest abundance of Class II. is Forfarshire, which is also the area of the least abundance of Class I. But as Class I. has its chief development in Aberdeenshire, and Class II. in Forfarshire, it may be that in these two centres of development the types proper to each may have been to a certain extent contemporaneous. In point of fact, Forfarshire shows only 7 monuments of the Aberdeenshire type to 32 of its own type, and Aberdeenshire shows only 5 monuments of the Forfarshire type to 41 of its own type. But this cannot alter the order of succession in Aberdeenshire, since we cannot place the Forfarshire type earlier than its prototype, for Class II. is simply Class I. with carving in relief and the addition of certain symbols, symbol-pictures, and decorative patterns.

But supposing the whole period of the two classes of monuments taken together in these two counties to have been nearly equal, it seems probable that Class I. lasted much longer in Aberdeenshire than Class II., the proportion being as 41 to 5; while Class II. lasted much longer in Forfarshire than Class I., the proportion being as 32 to 7. We may, therefore, conclude with probability that Class I. had not been long introduced into Forfarshire when it was changed into Class II., by the advancement of the art, but that the advanced type took some time to spread into Aberdeenshire, where the primitive type continued to prevail, although in Forfarshire it had speedily given way to the advanced type.

Taking it, therefore, as established that the rude, undressed, and unshaped monoliths graven only with the conventional symbols have their principal area in the north-eastern district thinning out to the northwards and southwards, it appears impossible to locate the area of their origin anywhere except within the area of their greatest prevalence. It might be argued that the round towers of Ireland were derived from those of Brechin and Abernethy, just as it might be argued that the prevalent type of the monuments of Aberdeenshire was derived from the two or three of the same type that are found in Orkney and Shetland, but the argument would be utterly inept unless it could also be shown that there were special reasons which had prevented the area of origin from becoming the area of prevalence, and had caused the development

of the style to be transferred to an area remote from that of its origin. For instance, the sudden conquest of the area by an alien race, driving the people to seek refuge in a region less exposed to danger, might prevent the area of the origin of a system of this kind from becoming the area of its subsequent development and prevalence. But as in this north-eastern district the monuments of all the three classes are present, there is no break in the continuity of the system to suggest any such disturbing influence, and we are thrown back upon the unavoidable conclusion that the type of Class I. originated and was developed in Aberdeenshire, spreading northwards and southwards from that centre, and that after it spread southwards to Forfarshire, Class II. was developed from it there, and spread northwards and southwards from that centre.

The sharpness of the line of demarcation on the south and west, between the common and conterminous areas of Class I. and Class II. on the one hand and the area which has only monuments of Class III. on the other, appears to indicate that during the period of the prevalence of the first two classes in the northern and eastern areas of the country, the monumental system did not extend itself to the western and southern districts till after Class III. had been developed from Class II. by the suppression of the symbols. The principal area of Class III. is, as might have been expected, the same as that in which the transition type of Class II. is most abundant—in the counties of Forfar and Perth—and thence they extend in all directions westwards, northwards, and southwards in a diminishing ratio.

Let us now consider the manner in which the monuments are grouped with reference to their special localities. The great majority of them have ecclesiastical associations, being situated either in churchyards or in the immediate neighbourhood of ancient ecclesiastical sites. They occur for the most part either singly or in very small groups, but there are a number of sites on which the groups are conspicuously large, and which on that account may be regarded as centres of the influence that produced the monuments. Supposing that a group of more than twelve monuments on one site is entitled to be regarded as a notable centre, we find the following places entitled to this distinction: Meigle in Perthshire with 30 monuments, St Vigeans in Forfarshire with 29 monuments, St Andrews in Fifeshire with 21 monuments, Strathmartine in Forfarshire with 14 monuments, and Drainie, the old Kinneddar, in Morayshire, with 13 monuments. Now, it is a very remarkable fact that on all these notable centres there is not a single monument of the primitive type of Class I. with the exception of one small fragment in the Elgin Museum said to be from Drainie. With that single exception they are exclusively of Class II. and Class III., that is, they are either monuments of the transition type or of the type which has Celtic ornament without the symbols. These notable centres, therefore, are centres of the transition type and the later type of monuments only, and not of the primitive type.

There is, however, a series of smaller centres in which the monuments are of the primitive type only. They are few in number, and the groups are small in compari-

son with those of the more notable centres. These are: Rhynie in Aberdeenshire with 6 monuments, Dinnacair in Kineardineshire with 6 monuments, Inverury in Aberdeenshire with 4 monuments, Kintradwell and Little Ferry in Sutherland with 4 monuments each, and Logie Elphinstone and Kintore in Aberdeenshire, and Inveravon in Banffshire, with 3 monuments each. We have, therefore, two sets of sites or centres of influence, one exhibiting the primitive type of monument in which the Pietish characteristics predominate, the other exhibiting the secondary type of a transition period in which the Irish characteristics begin to predominate. The one set of sites belongs to times and places in which the influence of the Irish Church was yet feeble, the other to times and places in which it was strong.

Another series of interesting results is derived from a comparison of the relative numbers of the different classes of monuments. In the whole of Scotland there are of Class I. 123 monuments on 84 sites; of Class II. 68 monuments on 44 sites; and of Class III. 307 monuments on 114 sites. But as the areas of the three classes are not conterminous, if we exclude the area west of Drumalban and south of the Forth and Clyde, where there are no monuments of Class I. and Class II., and take only the area on which there are monuments of all the three classes, we find that there are in the area north of the Forth and east of Drumalban of Class I. 123 monuments on 84 sites; of Class II. 68 monuments on 44 sites; and of Class III. 176 monuments on 59 sites. In this view of the relative proportion of the three classes to one another, it is seen that the number of Class III. is greater than that of Class I., but the number of sites is fewer, and that the number of Class II., whether reckoned by monuments or by sites, is little more than half the number of Class I. Judging by monuments, therefore, Class III. would be the most prevalent, whereas, if we judge by sites, Class I. is the most prevalent. It is obvious that the comparison by sites is a better criterion of general prevalence than that by the numbers of the monuments, as it is known that there are occasionally large numbers of monuments aggregated on certain sites. There is thus a very marked difference observable in the mode of their distribution, for whereas the greatest number of monuments of Class I. or Class II. on any one site within the area specified is 6, the greatest number of Class III. on one site is 23. In point of fact, the average number of monuments on the four sites which give the highest numbers of Class I. and Class II. is 6, while the average number on the four sites which give the highest number of Class III. is almost twenty. It is obvious from this that the two classes which bear the symbols must be regarded as the more characteristic and the more widely diffused throughout the area of eastern Scotland north of the Forth, while it is a feature of the distribution within the same area of the class without the symbols, that it is more aggregated in large groups at particular places, such as St Vigean, Meigle, St Andrews, Drainie, Tarbat, and Strathmartine, while in all the other sites in which they occur they exist only in groups of two, three, and four, like the other two classes.

This seems to show that, in comparison with the symbol-bearing monuments, the type of Class III. was less widely diffused, but that at the particular places where they are aggregated in exceptionally large groups there must have been special influences contributing to the elimination of the older characteristics from the monumental style.

Taking the disuse of the symbols as a test of the relative prevalence of the monuments within a given area before and after its occurrence, we have the remarkable fact that in Aberdeenshire, while there are 46 monuments erected prior to the disuse of the symbols, there are only 2 monuments on which the symbols do not appear. Of course we cannot say positively that these 2 monuments were erected after the symbols were disused, because the absence of this characteristic may be due to other causes; but it is possible to say with certainty that in Aberdeenshire there is no evidence of more than 2 monuments having been erected after the disuse of the symbols, which is a sufficiently remarkable fact. Similarly, we can say with regard to the two counties lying on either side of Aberdeenshire, viz., Kincardine and Banff, that there is no evidence of a single monument having been erected in them after the disuse of the symbols.

Again, going still further north, there is no evidence of more than 1 monument having been erected in Inverness-shire after the disuse of the symbols; while Sutherland possesses no more than 4 monuments, and Caithness only 2, which could have been erected after the disuse of the symbols. On the other hand, there is a curious interpolation of non-symbol-bearing monuments in large local groups in Elgin and Ross, the former of which has 14 symbol-bearing monuments, and 25 without symbols;¹ while Ross, which has 11 monuments with symbols, has 14 apparently without them. But if the doubtful fragments be excluded, the result for these two counties will be the same as for the others—that there is no evidence of any considerable number of monuments having been erected after the disuse of the symbols. The case, therefore, stands as follows. In all the north-eastern area of Scotland, from Kincardineshire to the Pentland Firth—that is, in the home area of the symbol-bearing monuments—the disuse of the symbols practically meant the disuse of the monuments. This may be put in another way—that in this area the symbols prevailed as long as the custom of erecting upright monumental slabs prevailed, or down to the time when the European style of recumbent slab came in—say, to the twelfth century.

If so, we must also infer that the people of this area continued to erect symbol-stones and almost nothing but symbol-stones for a considerable time after the people of the eastern area south of Kincardineshire, *i.e.*, in the counties of Forfar, Perth, and Fife, had discontinued the erection of symbol-stones and taken to the erection of

¹ Many of these, however, are mere fragments, of which it is impossible to say that, when entire, they may not have borne symbols.

monuments with crosses and Celtic ornament only. And the results of a comparison of the relative numbers of the monuments, before and after the disuse of the symbols in these counties, seem to bear this out, for while there are 39 monuments in Forfarshire bearing the symbols, there are 42 without the symbols; while Perthshire has 21 symbol-stones, it has 43 without the symbols; and while Fife has 3 symbol-stones, it has 35 without the symbols.

It is the fact that in each of these three counties the number of sites of the transition type of Class II. is about double the number of sites of the primitive type of Class I. This seems to imply that in Perth, Forfar, and Fife the custom of erecting these primitive symbol-stones derived from the area to the northward had scarcely taken root when it was developed into Class II. by the advancement of the art and the adoption of a less restricted system of symbolism, which gradually superseded the older system and thus produced Class III. It appears that this was accomplished by the transference of the primitive symbols from their original prominence on the monuments to subordinate positions amid a crowd of symbol-pictures and decorative patterns. The features which specially distinguish the monuments of Class II. from those of Class I. are not only the addition of a profusion of ornamental patterns, but chiefly the addition of the symbol of the cross as the principal feature of the monument, often carved of the whole length of the stone and richly decorated. Class III., which is characterised by the complete disuse of the primitive symbols, retains the decorative patterns and still presents the cross as its principal feature. It thus appears that the first stage of the progress towards the elimination of the primitive symbols was reached early in Class II., when the cross became the prominent feature of the monument, and the other symbols were reduced to the rank of accessories. Their complete abandonment followed in course of time, when, owing to their transference to a secondary place on the monuments, they gradually lost their importance and became obsolete.

Let us now see how the conclusions thus derived from the geographical distribution of the monuments fit into the historical aspects of the areas in which they are found. It is not to be expected that the synchronism of historical events with archaeological data can be determined with certainty where there is complete absence of historical testimony relevant to the questions at issue. But as all the conclusions of archaeology with respect to dates or periods are merely approximate results derived from data of a general nature, it may be possible to correlate the archaeological circumstances with particular periods of history, so as to obtain a working hypothesis for the historical classification of the monuments. We know historically that at the commencement of the seventh century Scotland was divided into four kingdoms, which may also be regarded as racial areas, viz. :—(1) The kingdom of the Picts, lying north of the Forth and east of Drumalban; (2) the kingdom of the Dalriadic Scots, lying west of Drumalban; (3) the kingdom of the Strathelyde Britons, lying south of the Clyde; and (4)

the kingdom of Bernicia or Northumbrian Saxonland, lying south of the Forth, both of the two last extending southwards beyond what is now the English border.

Applying the facts that have been demonstrated with respect to the geographical distribution of the different classes of monuments to these historical or racial areas, the first point to be observed is that the monuments of Class I. are confined to the kingdom of the Picts and common to both divisions of it, though most numerous in the division of the Northern Picts. The second point emerges on a close examination of the distribution of Class II., which has its principal area in the division of the Southern Picts. The monuments of this type are but sparsely distributed over the northern counties, and they do not appear at all in the island groups of Orkney, Shetland, and the outer Hebrides. Yet the type of Class I. from which they are derived and the type of Class III. into which they passed are both represented in these island areas; that is to say, the primitive type and the most advanced type are present, while the intervening type which constitutes the transition stage between them is absent. This is a fact for which it seems impossible to account on merely archaeological grounds, but the historical aspects of the area may contain the explanation. From the end of the eighth century to the commencement of the eleventh, the whole of this insular area was submerged by a tide of heathenism of alien origin.¹ There is a break in the continuity of the system of the monuments over the area which was thus submerged. This submergence might be a cause sufficient to account for the suppression of the system of Christian monuments existing in the area at the time, while the subsequent conversion of the dominant heathen race to Christianity might be a cause sufficient to account for the reappearance of the monumental system in its advanced contemporary form of Class III. And we find the monuments of Class III. in this area frequently exhibiting the characteristic influence of the alien domination. If this be not the true cause of the local break in the continuity of the system over the submerged area, it is at least a cause sufficient to have produced the effect, and no other equally sufficient or genuinely historical cause can be assigned. Assuming it, therefore, as a working hypothesis in the meantime, we arrive at the important conclusion that the period of the transition type of the monuments (Class II.) lay probably between the years A.D. 800 and A.D. 1000. But from this there arises a further conclusion that Class I. belongs to the period before A.D. 800.

The area of Class I. is coterminous with that of the Pictish kingdom as at the commencement of the seventh century. But Bede expressly states that the Picts were originally in occupation of the territory afterwards occupied by the Dalriadic

¹ From about the year 785 the isles of Shetland, Orkney, and the Hebrides were overrun by the heathen Vikings from Norway. About 875 they were subdued by King Harald Fairhair, and the story of the Earldom of Orkney as a colonial dependency of the heathen kingdom of Norway, from that time till the forcible conversion to Christianity of the Earl and his men by King Olaf Trygvesson in the last year of the tenth century, is well known.

Scots, who were Christians when they came from Ireland and settled in Argyle in the early years of the sixth century. If the Piets had had the custom of erecting these monuments while they were in possession of the territory west of Drumalban, some such monuments would probably have been found there. They are found in Orkney, Shetland, and the Hebrides, although these islands were colonised by heathen invaders, and there is no reason why they should not have been found in a territory colonised by Christian invaders, if they had previously existed there. If these indications are worth anything they point to the conclusion that the custom of erecting monuments of the type of Class I. had not become prevalent among the Piets at the close of the sixth century, when the Dalriadic Scots took possession of the territory west of Drumalban. In other words, the period of the incised symbol-stones (Class I.) appears to be limited to the seventh and eighth centuries, while that of Class II. appears to be limited to the ninth and tenth centuries.

But let the value of some of these indications be what it may, there can be no doubt of the significance of the fact that the symbol-bearing monuments (Class I. and Class II.) are not represented in the kingdom of the Dalriadic Scots who were Christians when they came over from Ireland and settled in Argyle about sixty years before St Columba. This fact must be taken to mean that these monuments are not due, primarily at least, to Irish influence, and that the influence under which their development took place had no effect upon the Christianity of Irish origin in that part of Scotland where the race and the religion were both directly derived from Ireland. Nor can there be any doubt of the significance of the fact that there is not a single monument of the two earlier classes in the kingdom of Northumbria, although its primitive Church was under the ecclesiastical rule of three successive bishops from Iona—Aidan, Finan, and Colman—and though the art of its earliest manuscripts was purely Irish.

It seems as if the relation of the symbols to the geographical distribution of the monuments was a relation of race—that they were used by the Piets in Pictland for the same reason for which they were *not* used by the Irish in Dalriada or by the Saxons in Northumbria—because they were a Pictish and not an Irish or a Saxon mode of expressing whatever they were meant to convey. The geographical distribution of the symbols themselves, taken separately, affords no clue either to their significance or to the manner of their application. It shows, however, that instead of the separate symbols being confined to separate areas of comparatively small extent, as they must necessarily have been if they were particular designations or insignia of tribal origin or family relationship, the system of the symbolism was a general one, applicable to the whole area of the eastern side of Scotland from Shetland to the Forth. In point of fact, the range in area of each separate symbol is very much the same, and there is no symbol of any frequency which can be said to be confined to any particular district unless it may be the bovine symbols of Burghead and

Inverness. The system, whatever it is, being thus a general one, and therefore inapplicable to tribes or families as such, is found equally difficult of application to individual distinctions such as those of rank or office. Not infrequently the same symbol is twice repeated on the same stone, and in the cases of monuments bearing three, four, or six separate symbols the difficulty of this application becomes insurmountable. Even if we suppose them placed on the monuments like the common symbols of the Christian faith, with reference not only to the particular person commemorated but to the general promulgation of the ideas embodied in the symbolism, we are still confronted by the difficulty of demonstrating them to be symbols of religious significance, whether Christian or Pagan. Some of them are neither Christian nor Pagan in any necessary or distinctive sense, and the argument that the monuments of Class I. must necessarily be Pagan because they bear no symbols that are obviously and distinctively Christian, is not entitled to the weight which at first sight it seems to carry with it. The same argument would make nearly the whole of the grave-slabs in the West Highland churchyards of thirteenth to sixteenth centuries Pagan. On the monuments of Class II. the conventional symbols of Class I. are constantly used in association with the cross and other symbols of the Christian faith. It is impossible that they could be so used in any Pagan sense, and we are not entitled to assume that they are used in one sense on the monuments of Class I. and in another sense on those of Class II. It has been supposed that their occurrence on the walls of caves implies a measure of antiquity incompatible with the idea of their being assigned to the Christian period. But it has to be remembered that there was a species of cave occupation which was essentially Christian in its origin and character, and the series of caves in which the symbols occur are quite evidently of this comparatively recent ecclesiastical occupancy. It was a well-known custom of the Celtic saints to retire to such solitary retreats, which thus, from the sanctity of their traditional associations, became in later times places of pilgrimage, and in some cases, when the concourse of pilgrims on the saints' days was large, chapels were improvised for their devotions, or the cave itself was converted into a chapel. The caves of St Ninian at Physgill, of St Medan at Kirkmaiden, of St Serf at Dysart, of St Adrian at Caiplic, of St Constantine at Fifeness, of St Regulus at St Andrews, and of St Gernadius at Kinneddar in Morayshire still bear the reputation of sanctity traditionally ascribed to their saintly occupants, and in many cases the sculpturings of a multitude of crosses and symbols on their walls bear witness to their continuous use for devotional purposes from a very early period. The recouidite symbols found associated with crosses and other Christian symbols on the walls of these caves are the same as those on the monuments, and if there might be reason to refrain from assigning to them a definitely Christian character and intention on the monuments, there can be no such reason when we find them on these caves, which practically were churches.

VII.—SUMMARY.

From the foregoing investigation of the nature and characteristics of the monuments, the following conclusions seem to emerge :—

The Early Christian Monuments of Scotland, like those of Wales and South-West Britain, begin with a type answering to that of the Early Christian Monuments of Romanised Gaul—inscribed in Roman capital letters with Latin epigraphs of extreme brevity, with or without the simple symbolism of the monogram or some form of the cross derived from it. This primitive type is confined to the Romanised area of Scotland, and chiefly to that part of it directly subjected to the influence of the Church of St Ninian, which it does not appear to have survived.

The primitive series of Christian monuments in Ireland begins with a type inscribed in ogham characters, and bearing a simple symbolism of encircled and equal-armed crosses of early form.

The ogham style of inscription seems to have been adopted in Wales and South Britain before the style of inscription in Roman capitals had ceased, and the fusion of the two styles produced the bilingual type of monument.

But the ogham style was not apparently adopted in Scotland until the earlier variety of that script was going out of use, for there is only one example of the early ogham in Scotland, all the rest being of the later scholastic variety used in the manuscripts. Before the adoption of the ogham style in Scotland, the style of bilingual inscriptions was also going out, for there is only one bilingual in Scotland. These two, the Auquhollie Stone with its early ogham, and the Newton Stone with its bilingual inscription, are the only links between the type of the unhewn symbol-stone of the Pictish area and the early Irish and British monumental types, inasmuch as the characteristic of being inscribed in oghams (when they bear inscriptions) is common to them all.

The Early Christian Monuments of Pietland—the un-Romanised area north of the Forth—exhibit no traces of direct derivation from or correspondence with the monumental systems of any external area, except that they sometimes bear ogham inscriptions. The symbolism of the primitive type (Class I.) is unique, and its peculiar figures, though found on monuments and metal-work as well as on rocks and in caves, do not occur in the manuscripts; although the oghams of their inscriptions are of the scholastic variety found in the manuscripts. But these peculiar symbols occur on the monuments of Class II. in intimate association with decoration derived from the manuscripts, and with other symbols which, like the cross, are frankly Christian, and therefore they cannot be held to be distinctively Pagan, nor can the monuments on which they occur unaccompanied by symbols which are known to be Christian, be assigned exclusively to the Pagan period.

The art-characteristics of the unshaped monuments of Class I. link them partly with the late-Celtic system of decoration developed in Britain in pre-Christian times, and partly with the earlier Irish manuscripts. In Class II. the influence of the manuscripts is predominant, and the peculiar symbolism is subordinated to a symbolism which is frankly Christian, and exhibits traces of the influence of the Bestiaries. In Class III. the influence of the Pietish symbolism is no longer traceable, and the decoration is less exclusively that of the Irish manuscripts, exhibiting in certain aspects the recognisable influence of the Hiberno-Saxon or Northumbrian school. Class I. and Class II. are almost exclusively confined to the Pietish area, while Class III. is not so confined, but extends over the greater part of the entire area of Scotland.

We have no means of determining the dates of origin of the different classes of monuments, or of estimating the duration of the overlap in the periods of transition. But, from such indications as are available for tentative conclusions, the early inscribed monuments of the Romanised area south of the Forth may be assigned approximately to the period including the fifth and sixth centuries; the unshaped stones with incised symbols of Class I. to that including the seventh and eighth centuries; the erect slabs of Class II., with figure subjects and symbols in relief, to that including the ninth and tenth centuries; while the slabs and crosses of Class III.—whatever may have been the period of their origin, or of the disuse of the symbols—were only displaced by the European style of grave-slab introduced with Gothic architecture in the twelfth century.

INDEX.

- Abercorn and Inchcolm, Hog-backed Monument at, lxvii.
- Aberlemno, Angels on Cross at, xlix.
— Centaur on Monument at, xlv.
- Abernethy, the Crucifixion on Cross-shaft from, xlix.
- Aboyne Stone, Ogham inscription on the, xxi.
- Accoutrements and Dress, as shown on the Monuments, lxv, lxvi.
- Aldbar and Nigg, David slaying the Lion, on cross-slabs at, l.
- Allegranza, *Monum. Antichi di Milano* (footnote), xvi.
- Allen (J. Romilly) appointed to the survey of the Monuments, iii.
— *Early Christian Symbolism* (footnote), v.
— *Monumental History of the Early British Church* by, viii.
- Alne in Yorkshire, Bestiary Sculpture at, xlii.
- Altyre, peculiarity of the Cross at, lvii.
- Amber, settings of, in a Brooch, xciii.
- Andromeda, lxiv.
- Angels, on Cross-slab at Aberlemno, xlix.
— at Benvie, xlix.
— at Eassie, xlix.
— at Kirriemuir, xlix.
- Animals represented in symbolism, xxxv.
- Animal Sculpture of the Monuments, art-treatment of the, lxv.
- Anna, Prioress of the Nunnery at Iona (footnote), xxxvii.
- Arbroath, the Breckenmoch bestowed on the Abbey of, lxxxix.
- Arinbiorg, at Kirk Andreas, Monument of, xliii.
- Armlets of Bronze from Castle Newe, lxxii.
— from Culbin Sands, lxxiii.
- Art of the Pagan Period, characteristics of the Early Celtic, lxix.
- Art characteristics of the earliest Monuments in Britain, lxviii.
— of the Monuments, lv-lxviii.
- Art relations of the Monuments, the, lxviii-ci.
- Archstone of Chancel in early Church at For-teviot, Sculptured, xliii.
- Ascension of Elijah, sculpture of the, l.
- Anquhollie, Kincardineshire, Ogham-inscribed Monument at, xx.
- Balmaclellan, Decorated Collar of Bronze from, lxxi.
— Mirror of Bronze found at, lxxi.
- Ball of Bronze, Decorated, lxxiii.
- Banchory Ternan, lxxxii.
- Barra, Rune-inscribed Monument from, xxviii.
— Symbol-stone with Cross from, xxxviii.
- Barrovad, Monument erected at Whithorn by the grandsons of, xiii.
- Basil, the Homilies of, xli.
- Bede, cix.
— *Ecclesiastical History*, xxxvii.
- Belt-Clasps, Early Christian Engravings upon, xix, li.
— from Burgundian graves, inscriptions on, xxiv.
— Early Mediaeval Burgundian, xix.
- Benvie, Angels on Cross-slab at, xlix.
- Bernicia, the Kingdom of, cix.
- Bernis, or Benres, name on Bressay Stone, xxii.
Bestiary, the, xl.
— Celtic Manuscripts of the, lxxxii.
- Bewcastle, Rune-inscribed Cross at, xxix.
- Birdlip, Mirror of Bronze from, lxx.
- Birsay, Tool-box of a Wood-carver found at, xcviii.
- Bishop Aidan, cx.
— Colman, cx.

- Bishop Finan, cx.
 — Fothad, lxxxii.
 Le Blant, *Inscriptions Chrétiennes* (footnote), iv.
 Boat, Sculptured on Monument at Cossins, xliii.
 Bone, Casket with Interlaced-work, made of Cetacean, xviii.
 Book of Armagh, Caligraphy of the, lxxvii.
 — of Deer, lxxxii.
 — of Durrow, Caligraphy of the, lxxvii.
 — of Durrow, Illuminated page from the, lxxvi.
 — of Kells, xxxiv.
 — — Caligraphy of the, lxxvii.
 — — Probable date of the, lxxx.
 — — Special features in the decoration of the, lxxviii.
 — of Lindisfarne, spiral ornament in the, lxxiii.
 — — Divergent spiral ornament from the, lxxviii.
 Bowl of Bronze, from Jaaten, in Norway, lxxvi.
 Brash, *Ogam Monuments of the Gael* (footnote), vii.
 Breac Moedog, the, xxxiv.
 Brechennoch, of St Columba, the, lxxxix.
 Breehin, Minuscule Inscription at, xxv.
 — the Virgin and Child on cross-slab at, xlvi.
 — Eagle of St John on the cross-slab at, xlix.
 — Lion of St Mark on the cross-slab at, xlix.
 Bressay, Deliverance of Jonah conventionalised on the slab at, li.
 — Inscription on the Stone at, xxii.
 Broch of Burrian, Ogham inscribed Stone found in the, xxiii.
 Brodie, Ogham Inscription on the Stone at, xxi.
 Bronze, Armlets of, from Castle Newe, lxxii.
 — — from Culbin Sands, lxxiii.
 — Ball of, from Walston, lxxiii.
 — Bowl of, from Jaaten, Norway, lxxvi.
 — Brooch of, found in Mull, xciv.
 — Chanfrein of, from Kirkeudbrightshire, lxxiv.
 — Mirror of, from Birdlip (figure of), lxx.
 — Mountings of, inlaid with gold, xcii.
 — Plaque of, from Chesterton, lxxv.
 — Crescentic Plate of, from the Laws, Monifieth, lxxxv.
 Brooch found at Hunterston, xviii.
 — of Bronze, found in Mull, xciv.
 — Fragment of a Silver, found at Dnubeath, xciii.
 — of Silver, found near Perth, xvi.
 Brooches, Hoard of Penannular, found at Croy, xcii.
 — of Silver, found at Rogart, xcv.
 Bruce, *Lapidarium Septentrionale* (footnote), iv.
 Bruun, Johan Adolf, *The Art of the Illuminated Manuscripts of the Middle Ages*, by, lxxx.
 Burghead, the bovine symbols of, cx.
 Burgundy and Switzerland, Early Christian graves in, li.
 Cahier and Martin, *Nouveaux Mélanges d'Archæologie* (footnote), xlii.
 Caiplie, Cave of St Adrian at, cxi.
 Caldrons of Bronze, enamelled, imported into Norway, lxxvi.
 Caligraphy of the Early Celtic Church, lxxvii.
 Camuston, Forfarshire, the Crucifixion on Cross at, xlix.
 — Dupplin and Abercorn, foliageous Scrolls on Crosses at, lxii.
 Casket of Cetacean Bone, decorated with Interlaced-work, xcix.
 Castle Newe, Aberdeenshire, pair of Bronze Armlets found at, lxxii.
 Catacombs, Representations of the Ascension of Elijah in the, l.
 — — of Daniel in the Lions' Den in the, li.
 — — of the Deliverance of Jonah in the, li.
 — — of the Magi, in the, liii.
 — — of the Raising of Lazarus in the, l.
 — — the Temptation in Eden in the, xlvi.
 Cat Stane, Kirkliston, the, xvii.
 Cattaneo, *Architecture in Italy from the Sixth to the Eleventh Century*, by (footnote), ci.
 Centaur, on the Monuments, xlv.
 Chain of Silver, found at Parkhill, New Machar, lxxxvii.
 — — found at Whitecleuch, Lanarkshire, lxxxvii.
 Chalmers (Patrick), of Aldbar (footnote), iii.
 Chanfrein of Bronze, from Torrs, Kirkeudbrightshire, lxxiv.
 Chesterton, Warwickshire, Bronze Plaque from, lxxv.
 Christ in Glory, on the Camuston Cross, xlix.
 Classification of the Monuments, xi.
 Closeburn and Aberlady, foliageous Scrolls on cross-shafts at, lxii.
 Coenwulf, Coins of, found at Croy, xcii.
 Collar of Bronze, with early Celtic decoration, lxxi.
 Combs placed in graves, xxxvi.
 Constantine, type of Early Christian Monuments during the reign of, v.
 Cornwall and Wales, the Newton Stone Inscription compared to others in, xxiv.

- Cossins, Sculpturing of boat on Monument at xliii.
- Spiral ornamentation on Monument at, lxi.
- Craignarget, Wigtownshire, Sun and Moon on Cross at, xlix.
- Crail, the Virgin and Child on cross-slab at, xlvi.
- Crescent-symbol, in combination with others, xxxiii.
- Crosier, found at Hoddam, with decoration in *niello*, xci.
- Cross, on cross-slab at Altyre, peculiarity of the, lvii.
- at Bewcastle, Rune-inscribed, xxix.
- on cross-slab at Glamis, peculiarity of the, lvii.
- at Ruthwell, Rune-inscribed, xxix.
- Development of, from the Monogram, v.
- on the Monuments, characteristics of the, lvii.
- Crosses, free-standing, lxvi.
- — Western type of, lxvi.
- — in Wigtownshire, lxvii.
- Croy, Inverness-shire, Hoard of Penannular Brooches found at, xcii.
- Coins of Coenwulf found at, xcii.
- Crucifixion, the, on cross-shaft from Abernethy, xlix.
- rarely sculptured with Celtic ornament, xlvi.
- on Cross, at Camuston, xlix.
- on cross-shaft at Monifieth, xlix.
- at Strathmartine, xlix.
- time-limits of the representation in sculpture of the, lxvi.
- Cunning (Rev. J. G.), *Manx Crosses* (footnote), xxviii.
- Culbin Sands, Bronze Armlet from, lxxiii.
- Cunningsburgh, Runic inscription at, xxviii.
- Daniel in the Lior Den, engraved on bronze belt-clasps, li.
- — representations in the Catacombs of, li.
- — on St Martin's Cross, at Iona, li.
- — on the Cross at Kiels, li.
- — on cross-slab at Meigle, li.
- — on slab at St Vigean, li.
- David slaying the Lion, on Sarcophagus at St Andrews, l.
- — on cross-shafts at Monifieth and Dupplin, l.
- — on cross-slabs at Nigg and Aldbar, l.
- Decoration in Enamels on the Monymusk Reliquary, lxxxviii.
- Decoration of the Celtic Manuscripts, approximate Date of the two styles of, lxxxviii.
- of the Monuments, range in time of the, lxviii.
- Deliverance of Jonah, conventionalised, lii.
- Didron, *Christian Iconography* (footnote), xxxviii.
- Distribution of the different classes of the Monuments, conclusions from the, cii-cxi.
- Dragon and Griffin, representations of, on the Monuments at Kettins and Meigle, lvi.
- Drainie, David slaying the Lion at, l.
- Dress and Arms, etc., as shown on the Monuments, lxx, lxvi.
- Drost and Forcus, names on Stone at St Vigean, xxvi.
- Drumalban, Mountain-range, cii.
- Dunbeath, Caithness, fragment of a silver Brooch found at, xciii.
- Duncan (Rev. Dr) of Ruthwell, xxix.
- Dunfallandy, Deliverance of Jonah, on shaft of Cross at, lii.
- Symbol of the Resurrection at, xlv.
- Symbols on Stone at, xxxviii.
- Dupplin and Monifieth, David slaying the Lion on cross-shafts at, l.
- Dynna, Hadeland, the Magi on Monument at, liii.
- Dysart, Cave of St Serf at, cxi.
- Eagle of St John, on Breehin cross-slab, xlix.
- Eassie, Angels on cross-slab at, xlix.
- Ecclesiasties, group of two with a disc between them, liv.
- Elgin, the Evangelists on slab at, xlix.
- Hunting scene on Monument at, lxx.
- Eogain, Monumental slab of, xxvi.
- Enamelling in decoration of the Monymusk Reliquary, lxxxviii.
- Enamels, use of, in Early Celtic Art, lxix.
- Enoch, near Whithorn, Monument at, xvii.
- Ere Mocudruidi, xxiii.
- Ethelburga, Mirror and Comb sent to Queen, xxxvii.
- Evangelists, the, on slab at Elgin, xlix.
- Evans, *Animal Symbolism in Ecclesiastical Architecture*, xli.
- Farr, Sutherlandshire, Fret-work on Monument at, lxi.
- Farnell, Forfarshire, the Temptation in Eden on cross-slab at, xlvi.
- Farrer, *Maeshore* (footnote), xxviii.
- Ferdomnach, Scribe of the Book of Armagh, lxxvii.
- Fergus, name on Stone at St Vigean, xxvi.

- Ferguson, *Ogham Inscriptions* (footnote), vii.
 Fifeness, Cave of St Constantine at, cxi.
 Florentius, Monument at Kirkmadrine to, xv.
 Fordoun, Kincardineshire, Minuscule Inscription at, xxv.
 Forteviot, sculptured Arch-stone from early Church at, xliii.
 Forglen, grant by William the Lion of the lands of, lxxxix.
 Forth, number of Monuments, north and south of the River, cii.
 Fret-work and Key-patterns, lx, lxi.
- Garucci, *Storia dell' Arte Cristiana* (footnote), xxxv.
 Glamis, Monument with Centaur at, xlv.
 — peculiarity of the Cross at, lvii.
 Golden Calf, probably symbolised at St Vigeans, lii.
 Golspie, Spiral Ornamentation on Monument at, lxi.
 — Ogham Description on the Stone at, xxi.
 Gospels, Caligraphy of the Celtic Manuscripts of the, lxxvii.
 Govan, Symbol of the Resurrection at, xlv.
 — and Meigle, Hog-backed Monuments at, lxvii.
 Gregory the Great and *Liber Physiologus*, xli.
 Gregory, Bishop, Monument at Ilipa to, xviii.
- Hexæmeron*, the, of Basil, xli.
 Hiberno-Saxon Capitals, Inscription in, xxvii.
 Hilton of Cadboll, foliageous scroll on Monument at, lxi.
 — — Hunting-scene on Monument at, lxv.
 Hoddam, Crosier found at, xci.
 Holm Cultram Abbey, *Liber Bestiarum* at, xli.
Hortus Deliciarum, a 12th Century MS. (footnote), xlvi.
 Hübner, *Inscr. Brit. Christ.* (footnote), iv.
 Hungus (or Angus), King of the Picts, representations probably of him and his three sons on Chancel Arch-stone of early Church at Forteviot, xliiii.
 Hunterston Brooch, the, xviii.
 Hunting-scenes on the Monuments, lxv.
- Ilipa, Monument to Bishop Gregory at, xviii.
 Inchbrayock, Samson smiting the Philistines, on Monument at, xlix.
 Inchinnan, Monument at, xlv.
 Inchmarnock, Rune-inscribed Cross at, xxviii.
 Inscribed Monuments, the, xii—xxx.
 Inscription at Tarbat, in Hiberno-Saxon Capitals, xxvii.
- Inscriptions, bi-lingual, xxiii—xxv.
 — on the Scottish Monuments, Geographical Distribution of the, xiii.
 — in Minuscules, xxv—xxvi.
 — in Roman Capitals, xiii—xix.
 — in Runes, xxviii—xxx.
 — on the Ruthwell Cross, translation of the, xxxi.
 — on the Scottish Monuments, rarity and variety of, xii, xiii.
 Interlaced-work on the Monuments, lviii.
 — Distinction between Irish and Scottish, lviii.
 — two varieties of, lix.
 — Zoöomorphic variety of, lix, lx.
 Inverury, Symbol Stone at, xxxv.
 Iona, Anna, Prioress of the Nunnery, at, xxxvii.
 — the Temptation in Eden, on cross-shaft at, xlvi.
 — Minuscule Inscriptions at, xxvi.
 Ireland, Characteristics of the Monuments in, vii.
 — Period of origin of Ogham Monuments in, ix.
 — the Symbol Stones, not primarily due to influence from, cx.
 Isle of Man, the Sigurd Myth in the, liii.
- Jaaten, Norway, Bowl of Bronze from, lxxvi.
 Jonah and the Whale, early representations of the story of, li.
 — — Abbreviation of conventional representations of, li.
 — — on a Glass Vessel from Podgoritza, lii.
 — — in the Vatican Codex, lii.
 — — on the Scottish Monuments, lii.
- Kemble (J. M.), Ruthwell Cross Inscriptions deciphered by, xxx.
 Kermod, Catalogue of the Manx Crosses (footnote), xxviii.
 Kettins, Griffinesque Sculpture on Monument at, xlvi.
 Key-patterns and Fret-work, lx.
 Kiels, Daniel in the Lions' Den on the Cross at, li.
 Kildalton, in Islay, the Virgin and Child on the Cross at, xlvi.
 Kinneddar, Cave of St Gernadius at, cxi.
 Kirkholm, Wigtownshire, rude representation of the Crucifixion at, xlix.
 Kirkliston, Inscribed Stone near, xvii.
 Kirkmadrine, Inscribed Monument at, xv.
 Kirkmaiden, Cave of St Medan at, cxi.

- Kirriemuir, Angels on cross-slab at, xlix.
 Kraus, *Die Christlicher Inschriften* (footnote), iv.
- Laws, Monifieth, Crescentic Bronze Plate from the, lxxxv.
Leabhar Breac, xli.
 Lethmott, Hiberno-Saxon Inscription found at, xxvii.
Liber Bestiarum, a copy of, at Holm Cultram Abbey, xli.
 ——— in Lincoln Cathedral, xli.
Liber Physiologus, denounced by Pope Gelasius, xli.
 ———, used by Gregory the Great, xli.
 Lincoln Cathedral, *Liber Bestiarum* in, xli.
 Landisfarne Gospels, date of the, lxxxix.
 Lion, Bestiary symbolism of the, xlii, xliv.
 ——— Breathing on its young to bring them to life, represented on Monuments, xliv.
 ——— Symbol of St Mark on Brechin cross-slab, xlix.
 Logie Stone, Wheel Ogham on the, xxi.
 Logierait, Symbol Stone at, xxxv.
- Maelpatrick O'Banain, xxvi.
 Magi, the representations of, in the Catacombs, liii.
 ——— on Monument at Dynna, Hadeland, liii.
 Malcolm of Moynusk, lxxxix.
 Manticora, the, on Monument at Meigle, xlv.
 ——— at Murthly, xlv.
 Manuscripts of the Seventh Century, illuminated, lxix.
 ——— Style of the Illuminated Celtic, lxxx.
 Martyrology of Aberdeen, lxxxii.
 Meendroi, name on Bressay Stone, xxii.
 Meigle, the Ascension of Elijah on a Slab formerly at, l.
 ——— Daniel in the Lions' Den on cross-slab at, li.
 ——— the Manticora on Monument at, xlv.
 ——— Recumbent Monument at, xlv.
 Middleton Moor, Derbyshire, Bronze Plaque found at, lxxxv.
 Minuscule Inscriptions, xxv.
 ——— at Iona, xxvi.
 Mirror of Bronze from Birdlip (figure of), lxx.
 ——— found at Balmaclellan, lxxi.
 Mirror and Comb sent to Queen Ethelburga, xxxvii.
 ——— in symbolism, xxxvi.
 Mommsen and Hübner, *Corpus Inscr. Lat.* (foot-note), iv.
 Monasterboice, Centaur on Cross at, xlv.
- Monifieth, the Crucifixion in Sculpture at, xlix.
 ——— Symbols and numbered Figure on Stone from, xxxix.
 Monker Green, Stromness, Mounting of Bronze found at, xcii.
 Monogram, Limits of prevalence of the, v.
 Monuments of Class III., Principal Area of, cv.
 ——— all the three Classes present in the North-Eastern Area, cv.
 ——— Art-characteristics of the Earliest Christian, in Britain, lxxviii.
 ——— boat-shaped or hog-backed, lxxvii.
 ——— Earliest British type of Christian, v.
 ——— of Class I., Centres of the, xvi.
 ——— of Classes II. and III., notable centres of the, cv.
 ——— of Class II., Characteristics of the, xl.
 ——— Classification of the, xi.
 ——— Summary of conclusions regarding the, cxii.
 ——— of Class II., characteristic feature of the cutting in the, lxxvii.
 ——— of Class I., probable dates of, cix, cxiii.
 ——— of Class II., probable dates of, cix, cxiii.
 ——— general decoration of the surface of, lviii.
 ——— range in time of the Decoration of the, lxxviii.
 ——— of Class II., General Scheme of Decoration in the, lvii.
 ——— of Class III., Development of the, lxxi.
 ——— Area of the Greatest Development of the, cii.
 ——— Least Development of the, cii.
 ——— absence of Monumental Style in the earliest, lv.
 ——— Number of, in different Geographical areas, cii.
 ——— in the light of local history, the, cviii.
 ——— at Inchinnan and Newton Woods, xlv.
 ——— in Scotland, rarity of Inscriptions on the, xii.
 ——— Interlaced-Work on the, lviii.
 ——— in Ireland, Characteristics of the, vii.
 ——— Grouping according to Special Localities of the, cv.
 ——— Zoöomorphic Mouldings on some of the, lvi.
 ——— of primitive type not found where the other two classes prevail, cv.
 ——— the numbers of each class of the, cvi.
 ——— in Scotland, number of the, xi.
 ——— the symbolism of the, xxxi.
 ——— phase of symbolism in each Class of the, xxxii.

- Monuments of Class II., the transition type of the, ciii.
- Monymusk Reliquary, the, lxxxix.
- Mortlach, Hunting Scene on Stone at, lxv.
- Mugdrum and Crieff, foliageous Scrolls on slabs at, lxi, lxii.
- Mull, Bronze Brooch found in, xciv.
- Muller (Dr Sophus), *Dyornamentiken i Norden*, lxxviii.
- *Nordisk-Irsk Ornamentik*, lxxxii.
- Murthly, the Manticora on Monument at, xlvi.
- Museum of the Lateran, Sarcophagus in, lxiv.
- Naddod, name on the Bressay Stone, xxii.
- a Viking, xxii.
- O'Neill's *Irish Crosses*, xxxiv, lv.
- Newton Stone, xx.
- Inscriptions on the, xxiii.
- Newton Woods, Monument at, xlv.
- Nigg, the St Anthony Tau-cross on slab at, lv.
- Zoömorphic Interlaced-work at, lx.
- Niello, use of, in St Fillan's Crosier, xci.
- in Early Celtic Decoration, use of, xci.
- Norrie's Law, Largo, Hoard of Silver Ornaments found at, lxxxiii.
- Ogham Inscription on Aboyne Stone, xxi.
- — at Auquhollie, Kincardineshire, xx.
- — on the Bressay Stone, xxii.
- — on the Brodie Stone, xxi.
- — on the Golspie Stone, xxi.
- — on the Scoonie Stone, xx.
- Ogham Inscriptions, xix-xxiii.
- — in Scotland, range of date of, xxiii.
- Ogham Monuments in Ireland, vii, ix, x.
- Oghams, in bilingual Inscriptions, xxiii-xxv.
- Overkirkhope, Sculptured Stone found at, xix.
- Pagan period, Celtic Art of the, lxix.
- Papa Stronsay, fragment of Minuscule Inscription at, xxv.
- Parkhill, Terminal Ring of the Silver Chain found at, lxxxvi.
- Pennant, notice of Cross at Ruthwell by, xxix.
- Perth, Silver Brooch found near, xcvi.
- Peter the Apostle, Monument inscribed with the name of, xvii.
- Petrie, *Christian Inscriptions in the Irish Language*, vi.
- Physgill, Cave of St Ninian at, exi.
- Physiologus*, xl.
- Picts, the Kingdom of the, cviii.
- Plaque of Bronze from Chesterton, lxxv.
- — — — — Ornamented, found at Middleton Moor, lxxv.
- Podgoritz, Glass Vessel engraved with Scriptural Subjects found at, li, lii.
- Pope Boniface, xxxvii.
- Gelasius, *Liber Physiologus* denounced by, xli.
- Priory at Whithorn, Monument inscribed with Runes at the, xxix.
- Raising of Lazarus, Representations in the Catacombs of the, l.
- — — — — on cross-shaft at St Andrews, the, l.
- Raskur, name on Monument, from Barra, xxviii.
- Ravenna, Deliverance of Jonah, in the Baptistry, at, lii.
- Robert the Bruce, xci.
- Rogart, Sutherlandshire, two Silver Brooches found at, xcvi.
- Roma Sotteranca* (De Rossi) (footnote), iv.
- Rossie Priory, and Rosemarkie, forms of the Crosses at, lvii.
- Reliquary, enamelled decoration on the Mounymusk, lxxxviii.
- Resurrection, Bestiary Symbol of the, xliv.
- Runes, from Barra, Monument with, xxviii.
- at Cumingsburgh, Inscription in, xxviii.
- at Inchmarnock, Cross inscribed with, xxviii.
- Inscriptions in, xxviii-xxxii.
- in St Ninian's Cave, fragments of, xxix.
- at Thurso, Inscription in, xxviii.
- at the Priory of Whithorn, xxix.
- on the Ruthwell Cross, xxix.
- Ruskin, *Stones of Venice* (footnote), lviii.
- Ruthwell Cross, description of the, xxx.
- — — — — translation of Runic Inscription on the, xxxi.
- — — — — Scriptural Scenes on the, xlvi.
- — — — — Sun and Moon on the, xlix.
- — — — — Symbols of SS. John and Mark on the, xlvi.
- St Adrian, Cave of, at Caipie, exi.
- St Andrews, Cave of St Regulus at, exi.
- David slaying the Lion on Sarcophagus at, l.
- the Raising of Lazarus, on cross-shaft at, l.
- St Anthony, on the Ruthwell Cross, xxx.
- Tau-cross of, on slab at Nigg, lv.
- St Brendan, xli, lxxxii.
- St Chad, Gospels of, xxxiv.
- St Constantine, Cave of, at Fifeness, exi.

- St Cuthbert, xxxvi.
 — Coffin of, xxx.
- St Cyriacus, Embroidered Robe of (footnote), xxxiv.
- St Fillan's Crosier, use of *niello* in Decoration of, xci.
- St Gernadius, Cave of, at Kinneddar, exi.
- St John and St Mark, on the Ruthwell Cross, Symbols of, xlviii.
- St Kentigern, xxxvi.
- St Madoes, Symbols on cross-slab at, xxxviii.
- St Martin's Cross, Iona, Representation of Daniel in the Lions' Den, on, li.
- St Medan, Cave of, at Kirkmaiden, exi.
- St Mogue, Shrine of, xxxiv.
- St Ninian, Cave of, at Physgill, exi.
- St Ninian's Cave, Inscription in Runes in, xxix.
- St Peter, Mirror and Comb, the blessing of, xxxvii.
- St Regulus, Cave of, at St Andrews, exi.
- St Serf, Cave of, at Dysart, exi.
- St Ternan's Copy of the Gospels, lxxxii.
- St Vigean's, Daniel in the Lions' Den, on Grave-slab at, li.
- Dragonesque Sculpture at, xlvii.
- The Golden Calf (probably) represented at, liii.
- Minuscule Inscription at, xxv.
- Samson smiting the Philistines, on Monument at Inchbrayock, xlix.
- San Ambrogio, Milan, Stag-hunt sculpture at, xlvii.
- San Zenone, Verona, Stag-hunt sculpture at, xlvii.
- Sarcophagus at Spoleto, symbolic ship sculptured on a, xliii.
- Scoonie, Hunting scene on the stone at, lxxv.
- Ogham inscription on the stone at, xx.
- Scotland, number and distribution of the Monuments in, xi, cii.
- Two Monumental Arcs in, ciii.
- Ogham Inscriptions in, vii.
- *The Sculptured Stones of* (footnote), iii.
- Scots, The Kingdom of, the Dalriadic, cviii.
- Scroll in Decoration, the foliageous, lxi.
- foliageous, on cross-slabs and crosses, lxi, lxii.
- Scrolls on representations of Animals, lxiii.
- Sculpture at Alnc, Yorkshire, Example of Bestiary, xlii.
- Sculptures, Bestiary, at Souvigny, xlv.
- Shandwick, Ross-shire, Fretwork on Monument at, lxi.
- Hunting scene on Monument at, lxxv.
- Symbol of the Resurrection at, xlv.
- Ship, use of the Symbolic in Early Christian Sculpture, xliii.
- Sigurd Myth in Monumental Sculpture, in Isle of Man, liii.
- Silver, Brooch of, found near Perth, xxvi.
- Brooches of, found at Rogart, xxv.
- Chain of, from Parkhill, lxxxvi.
- Fragment of a Brooch of, found at Dunbeath, xciii.
- Ornaments of, from Norrie's Law, Largo, lxxxiv.
- Sites of Monuments, relative numbers of, in different geographical areas, cii.
- Southill, Cornwall, Early Monument at, vi.
- Souvigny, Bestiary Sculptures at, xlv.
- Spiral Ornamentation on Monuments at Meikle and Drainie, lxi.
- Ornamentation, varieties of, lxi.
- Divergent, from Book of Lindisfarne, lxxxviii.
- Use of the Diverging, in Celtic Art, lxxix.
- Spirals, Divergent, in the Book of Durrow, lxxxvi.
- Divergent, on Bronze Mirror, lxx.
- with Zoömorphie treatment, lxi.
- Spoleto, Sculpture of Ship on Sarcophagus at, xliii.
- Stag-hunt, Sculpture at Milan, xlvii.
- — at Verona, xlvii.
- — in association with Biblical subjects, xlvii.
- — Explanation of the Symbolism of (footnote), xlvii.
- Stephens, *Old Northern Runic Monuments* (footnote), xv.
- Strathclyde Britons, the Kingdom of the, cviii.
- Strathmartine, Forfarshire, the Crucifixion at, xlix.
- Stuart (Dr John) (footnote), iii.
- Sun and Moon on Cross at Craigmarget, xlix.
- — on the Ruthwell Cross, xlix.
- Symbolism of the Monuments, the, xxxi-lv.
- — Animals represented in the, xxxv.
- — not Tribal, cx.
- Symbols, the Burghead Bulls, cx.
- Grouped with figure-subjects on Dunfallandy and St Madoes Stone, xxxviii.
- on the Walls of Caves, cxi.
- Tarbat, Inscription in Hiberno-Saxon Capitals at, xxvii.
- foliageous Scroll on Stone at, lxi.
- Tau-cross of St Anthony on the slab at Nigg, lv.
- "Te Deum," Early Forms of the, xiv.
- Temptation in Eden, the, on Frescoes in the Catacombs, xlviii.

- Temptation in Eden, the, on cross-slab at Farnell, xlviij.
- — on cross-shaft at Iona, xlviij.
- Thurualtr, at Kirk Andreas, Monument of, xliij.
- Time-range of the Decoration of the Monuments, lxviiij.
- Tool-box of a Wood-carver, found in Orkney, xcviiij.
- Torrs, Kelton, Kirkcudbrightshire, Bronze Mask from, lxxiv.
- Troyon, in *Mittheilungen der Antiq. Gesellschaft in Zurich* (footnote), xix.
- Undset, *Le Dernier Age de Fer in Norvége* (footnote), lxxvi.
- Vetta, Inscription to, at Kirkliston, xvij.
- Virgin and Child, on cross-slab at Brechin, xlviij.
- — on cross-slab at Crail, xlviij.
- — on the Kildalton Cross, xlviij.
- — on St Martin's Cross, xlviij.
- Viventius and Mavorius, Monument to, xiv.
- De Vogüe, *Syrie Centrale* (footnote), xvi.
- Wales, Monuments bearing Ogham Inscriptions in, vii.
- Walston, Lanarkshire, Bronze Ball from, lxxiiij.
- Westwood, *Miniatures and Ornaments of Anglo-Saxon and Irish Manuscripts* (footnote), xvi, lxiiij.
- Whitecleuch, Lanarkshire, Chain of Silver found at, lxxxvii.
- Whithope, Selkirkshire, Inscribed Monument at, xviiij.
- Whithorn, Monument to Latinus at, xiiij.
- Monument by the Grandsons of Barrovad at, xiv.
- Wigtownshire, free-standing Crosses in, lxxvii.
- William the Lion, Grant of the Brechennoch to Arbroath Abbey, lxxxix.
- Wood-Carver, Tool-box of a, found at Birsay, xcviij.
- Woodwray, Deliverance of Jonah, on cross-slab from, lii.
- Spiral Ornamentation on Monument at, lxi.
- Wyntoun's Account of Bishop Fothad's Gospel Book, lxxxii.

PART I I.

GENERAL RESULTS

ARRIVED AT FROM THE

ARCHÆOLOGICAL SURVEY

OF THE

EARLY CHRISTIAN MONUMENTS OF SCOTLAND.

By J. ROMILLY ALLEN, C.E., F.S.A. Scot.

I.—CLASSIFICATION OF THE MONUMENTS.

In dealing scientifically with the archaeological materials¹ of any given geographical area, the first step to be taken is the classification of the various specimens by arranging them in groups possessing certain characteristics in common.² The most useful characteristics for purposes of classification are those which indicate most clearly the development of human ingenuity or culture required for the production of each specimen, so that by studying the advance or decay of any particular art a sequence of types may be established. The monuments now under consideration form only a small portion of the archaeological materials to be derived from Scotland as a whole, and they are separated from the rest by the following characteristics which they possess in common—(1) the monuments are all of stone; (2) the decoration is sculptured; and (3) the sculptured designs consist of certain symbols of unknown meaning, and of ornamental patterns similar to those found in the illuminated pages of the Hiberno-Saxon MSS. between 700 and 1100 A.D.

Having now defined the special group of monuments to be investigated, the next thing is to classify the specimens composing that group. In order to do this attention must be directed principally to (1) the architectural features, *i.e.*, the general form given to the monument, and the method of its construction if composed of more than one piece of stone; (2) the decorative features, *i.e.*, the ornamental patterns, symbols, and figure subjects; and (3) the technical method by which the sculpture is executed, *i.e.*, whether it is done with incised lines or in relief.

A study of the architectural features of the monuments reveals the fact that a certain proportion of them possess no architectural features whatever, that is to say, the stones on which the designs are sculptured show no trace of having been dressed into any artificial shape with a tool. Being ruder and less highly developed than the others, these monuments are

¹ "The materials from which we derive our knowledge of the culture and civilisation existing in Scotland in the past, include all the remains of man and his works found within that area" (Dr J. Anderson's *Scotland in Early Christian Times*, 1st series, p. 7).

² *Ibid.*, p. 20.

placed in Class I. The decorative features consist exclusively of symbols, which are frequently ornamented with curved or spiral lines. All the designs are executed in outline with incised lines. This is not, strictly speaking, sculpture at all, but rather the art of drawing applied to stone. The subjects of the sculpture and technical methods show hardly any variation, so that the only way in which the stones belonging to Class I. are capable of subdivision is by arranging them according to their natural forms and the relative proportions of the three dimensions—length, breadth, and thickness. Thus the term “pillar” may be applied in cases where the breadth and thickness are nearly equal and the length is considerably greater; the term “slab” when the length and breadth are nearly equal and the thickness is considerably less; and the term “block” when the length, breadth, and thickness are nearly equal. The majority of the stones belonging to Class I. have either been moved from the positions which they originally occupied, or have been broken up and used as building material, so that it is now quite impossible to determine whether they were intended to stand erect, to lie prostrate on the ground, or to form part of some structure. A certain proportion of the stones appear to be still *in situ*, and all of these are erect, so that possibly all the others stood upright also.

In Class II. are placed all the symbol-bearing monuments which are not included in Class I. They consist exclusively of upright cross-slabs, *i.e.*, stones cut into the form of an approximately rectangular slab having a cross sculptured in relief on one or more faces, and intended to stand vertically in the ground or in a stone socket. The cross is usually placed on the front of the slab and the symbols on the back. In the decorative features Celtic forms of ornament predominate, and the sculpture is executed in relief.

Class III. is reserved for all monuments having Celtic ornament sculptured in relief, which are not included in Class II. They exhibit a much greater variety of form than the stones in the other two Classes. Besides upright cross-slabs, similar to those already described, there are upright free-standing crosses (where the outline of the stone takes the shape of a cross); recumbent cross-slabs (carved on one face only); recumbent body stones (carved on several faces); stone coffins; altar tombs; and architectural details of buildings.

II.—THE GEOGRAPHICAL DISTRIBUTION OF THE LOCALITIES WHERE THE MONUMENTS OCCUR.

The following tables show the geographical distribution of the three classes of monuments :—

CLASS I.

NORTHERN SECTION.

SHETLAND—

Lerwick (locality unknown).

Sandness.

Uyea (now at Edinburgh).

ORKNEY—

Firth (now at Edinburgh).

S. Ronaldsay (now at Edinburgh).

CAITHNESS—

Birkle Hill, Keiss (now at Edinburgh).

Sandside.

Thurso (now at Copenhagen).

SUTHERLAND—

Clynekirkton (two stones, now at Dunrobin).

Clynemilton (now at Dunrobin).

Craigton (two stones, now at Dunrobin).

Dunrobin.

Kintradwell (four stones, now at Dunrobin).

Kirtomy (now lost).

Little Ferry Links (four stones, now at Dunrobin).

Ross—

Ardross (two stones, now at Inverness).

Dingwall.

Edderton.

Strathpeffer.

Rosskeen.

INVERNESS—

Balblair (now at Moniak).

Congash (two stones).

Dores (now at Edinburgh).

Drumbuie (two stones, now at Balmacraan).

Dunnachtton.

Findlarig (now at Edinburgh).

Inverallan.

Inverness (two stones).

Knoeknagael.

Lynchurn.

Moniak (from Torgorm).

HEBRIDES—

Benbecula (now at Edinburgh).

Pabbay, Barra Islands.

NORTH-EASTERN SECTION.

ELGIN—

Birnie.

Burghhead (six stones—two at Elgin, one at Edinburgh, and one in British Museum).

Covesea (on walls of cave).

Drainie (now at Elgin).

Grantown (now at Edinburgh).

Knockando (two stones).

Upper Manbean.

BANFF—

Ardilly.

Balneilan.

Inveravon (three stones).

North Redhill.

ABERDEEN—

Bourtie.

Clatt (now at Knockespeck).

Corrachree (or Logiemar).

Crichie.

CLASS I. (*continued*).NORTH-EASTERN SECTION (*continued*).ABERDEEN (*continued*)—

Daviot (now at Mounie).
 Old Deer.
 Drimmies.
 Dyce.
 Fetter Angus.
 Fyvie (two stones).
 Huntly (or Strathbogie).
 Inch-(Myreton Farm).
 Inverury (four stones).
 Keith Hall (from river Don).
 Kinellar.
 Kintore (three stones—two now at
 Edinburgh).

Leys of Dummuies (now at Huntly).
 Logie Elphinstone (three stones).
 Newbiggin Leslie.
 Newton (in the Garioch).
 Mill of Newton (now at Tillypronie).
 Park (Deeside).
 Percylieu (now at Crausmill).
 Rhynie (six stones).
 Rothie Brisbane.
 Tillytarmont.
 Tullich.
 Tyrie.

EAST-CENTRAL SECTION.

KINCARDINE—

Stonehaven (six stones, now lost).

FORFAR—

Aberlemno.
 Arbirlot.
 Baggerton.
 Dunnichen.
 Keillor.
 Linlathen.
 Strathmartin.

PERTH—

Abernethy.
 Bruceton.
 Cargill.
 Dunkeld.
 Strowan.

FIFE—

Lindores.
 East Wemyss (on walls of caves).

SOUTH-WESTERN SECTION.

KIRKCUDBRIGHT—Anwoth (on rock-surface).

SOUTH-EASTERN SECTION.

MIDLOTHIAN—Edinburgh.

CLASS II.

NORTHERN SECTION.

CAITHNESS—

Skinnet (now at Thurso).
 Ulbster (now at Thurso).

SUTHERLAND—

Golspie (now at Dunrobin).

ROSS—

Hilton of Cadboll (now at Inver-
 gordon).
 Nigg.
 Rosemarkie.
 Shandwick.
 Tarbet (now at Invergordon).

NORTH-EASTERN SECTION.

NAIRN—

Glenferness.

ELGIN—

Brodie.
 Elgin.

BANFF—

Mortlach.

ABERDEEN—

Dyce.
 Formaston (now at Aboyne).
 Maiden Stone (Chapel of Garioch).
 Migvie.
 Monymusk.

EAST-CENTRAL SECTION.

KINCARDINE—

Fordoun.

FORFAR—

Aberlemno (two stones).
 Balluderon.
 Cossins.
 Eassie.
 Farnell (now at Montrose).
 Glamis (two stones).
 Inchbrayock (two stones, now at
 Montrose).
 Kettins.
 Kinell.
 Kingoldrum (now at Edinburgh).
 Kirriemuir (two stones).
 Monifieth (three stones, now at
 Edinburgh).

FORFAR (*continued*)—

Strathmartin (six stones—one at
 Edinburgh and four at Baldevan).
 St Vigean's (six stones).
 Woodwray (now at Abbotsford).

PERTH—

Alyth.
 Dunfallandy.
 Fowlis Wester.
 Gask (now at Moncrieffe).
 Logierait.
 St Madoes.
 Meigle (eight stones).
 Murthly.
 Rossie.

FIFE—

Largo (now at Polton).
 Scoonie (now at Edinburgh).

CLASS III.

NORTHERN SECTION.

SHETLAND—

Bressay (now at Edinburgh).
 Papil (now at Edinburgh).
 South Garth (Island of Yell).

ORKNEY—

Flotta (now at Edinburgh).

CAITHNESS—

Reay.

SUTHERLAND—

Clynekirkton (now at Dunrobin).
 Collieburn (now at Dunrobin).
 Farr.
 Lothbeg (now at Dunrobin).

ROSS—

Edderton.
 Kincardine.
 Rosemarkie (three stones—two now
 at Edinburgh).
 Tarbet (nine stones—two at Edin-
 burgh and seven at Inver-
 gordon).

INVERNESS—

Canna (Isle of).

HEBRIDES—

Berneray.
 Kilbar.

NORTH-EASTERN SECTION.

NAIRN—

Achareidh.
 Wester Delnies.

ELGIN—

Altyre.
 Birnie (four stones).
 Burghead (seven stones).

ELGIN (*continued*)—

Drainie (twelve stones, now at
 Elgin).
 Forres.

ABERDEEN—

Aboyne.
 Fyvie.

EAST-CENTRAL SECTION.

FORFAR—

Aldbar.
 Benvie.
 Brechin (two stones—one at Aldbar).
 Camuston.
 Inchbrayock (now at Craig).
 Invergowrie (two stones).
 Kingoldrum (two stones, now at
 Edinburgh).
 Kirriemuir (three stones).
 Lethnott (now at Edinburgh).
 Menmuir (two stones).
 Monifieth (now at Edinburgh).
 Strathmartine (nine stones, now at
 Baldovan).
 St Vigean's (twenty-three stones).

PERTH—

Abernethy (three stones—two now
 at Edinburgh).
 Carpow (now at Mugdrum).
 Crieff.
 Dull (now at Edinburgh).

PERTH (*continued*)—

Dunblane (two stones).
 Dunkeld (two stones).
 Dunning.
 Dupplin.
 Forteviot (six stones).
 Invermay.
 St Madoes.
 Meigle (twenty-two stones—seven
 now lost).

FIFE—

Abercromby (five stones).
 St Andrews (twenty-one stones).
 Crail.
 Dogtown.
 Dunino (now at St Andrews).
 Inchcolm (two stones).
 Inverkeithing (now lost).
 Mugdrum.
 Sauchope.

KINROSS—

Tullibole (now at Edinburgh).

CLASS III. (*continued*).

WESTERN SECTION.

ARGYLL—

Ardehattan.
 Balnahard, Colonsay (now at Edinburgh).
 Eilan Mòr.
 Iona (thirteen stones).
 Keills.
 St Kieran's Cave.
 Kildalton.
 Killinan.

ARGYLL (*continued*)—

Kilmartin.
 Kilneave.
 Riskbuie.
 Sanda, St Ninian's.
 Soroby.

BUTE—

Millport.
 Rothesay (two stones).

SOUTH-WESTERN SECTION.

DUMBARTON—

Kilpatrick.
 Mountblow (now at Glasgow).
 Roseneath.

RENFREW—

Arthurlee.
 Barrochan.
 Inchinnan (three stones).
 Jordanhill.
 Newton Woods.
 Stanlie.

LANARK—

Govan (thirty-four stones).
 Hamilton.
 Lesmahagow.

AYR—

Mansfield.

WIGTOWN—

Craiglemine, Glasserton (two stones, now at Edinburgh).
 Glenluce (two stones—one now at Edinburgh).
 Kirkeolm (now at Corsewell).
 Kirkinner (two stones).
 Kirkmaiden.
 Mochrum (now at Edinburgh).
 Monreith.
 St Ninian's Cave.
 Penninghame, Mains of (now at Edinburgh).
 Whithorn (twelve stones).
 Wigtown.

KIRKCUDBRIGHT—

Minningaff (two stones).

SOUTH-EASTERN SECTION.

LINLITHGOW—

Abercorn (two stones).

MIDLOTHIAN—

Borthwick (now at Edinburgh).

HADDINGTON—

Aberlady (now at Carlowrie).

BERWICK—

Coldingham (now at Edinburgh).

ROXBURGH—

Gattonside (now at Edinburgh).
 Jedburgh (four stones).

PEEBLES—

Innerleithen.

DUMFRIES—

Closeburn (now at Thornhill).
 Durrisdeer (now at Thornhill).
 Glencairn (now at Thornhill).
 Hoddam (two stones—one now at Edinburgh).
 Penpont (two stones, now at Thornhill).
 Thornhill.
 Wamphray.

COUNTIES.	CLASS I.		CLASS II.		CLASS III.		TOTALS.	
	Places.	Stones.	Places.	Stones.	Places.	Stones.	Places.	Stones.
<i>Northern Section—</i>								
Shetland,	3	3	—	—	3	3	6	6
Orkney,	2	2	—	—	1	1	3	3
Caithness,	3	3	2	2	1	1	6	6
Sutherland,	7	15	1	1	4	4	12	20
Ross,	5	6	5	5	4	14	14	25
Inverness,	11	14	—	—	1	1	12	15
Hebrides,	2	2	—	—	2	2	4	4
<i>North-Eastern Section—</i>								
Nairn,	—	—	1	1	2	2	3	3
Elgin,	6	12	2	2	5	25	13	39
Banff,	4	6	1	1	—	—	5	7
Aberdeen,	28	41	5	5	2	2	35	48
<i>East-Central Section—</i>								
Kincardine,	1	6	1	1	—	—	2	7
Forfar,	7	7	15	32	13	49	35	88
Perth,	5	5	9	16	12	42	26	63
Fife,	1	1	2	2	9	34	12	37
Kinross,	—	—	—	—	1	1	1	1
Clackmannan,	—	—	—	—	—	—	—	—
Stirling,	—	—	—	—	—	—	—	—
<i>Western Section—</i>								
Argyll,	—	—	—	—	13	25	13	25
Bute,	—	—	—	—	2	2	2	2
<i>South-Western Section—</i>								
Dumbarton,	—	—	—	—	3	3	3	3
Renfrew,	—	—	—	—	6	8	6	8
Lanark,	—	—	—	—	3	36	3	36
Ayr,	—	—	—	—	1	1	1	1
Wigtown,	—	—	—	—	12	28	12	28
Kirkcudbright,	—	—	—	—	1	2	1	2
<i>South-Eastern Section—</i>								
Linlithgow,	—	—	—	—	1	2	1	2
Midlothian,	1	1	—	—	4	8	5	9
Haddington,	—	—	—	—	1	2	1	2
Berwick,	—	—	—	—	1	1	1	1
Peebles,	—	—	—	—	1	1	1	1
Selkirk,	—	—	—	—	1	1	1	1
Roxburgh,	—	—	—	—	2	5	2	5
Dumfries,	—	—	—	—	7	9	7	9
	86	124	44	68	119	308	249	508

An inspection of the above table shows that the total number of localities in Scotland where sculptured stones belonging to all three classes are found amounts to 249, and the total number of monuments to 508.¹ The relative proportions of the numbers belonging to each class are as follows:—

	Places.	Stones.
Class I.,	86	124
Class II.,	44	68
Class III.,	119	308

It must be borne in mind that the number of stones included in Class III. is rather greater than it should be, because many fragments that have only Celtic ornament upon them may have formed parts of monuments bearing symbols as well. Nevertheless it is a significant fact that the number of stones belonging to Class III. is greater than those belonging to Class I. and Class II. both put together.

The geographical area over which the symbol-bearing stones of Class I. and Class II. are spread comprises the Islands of

Shetland. | Orkney. | Hebrides.

and the Counties of

Caithness.	Nairn.	Kincardine.
Sutherland.	Elgin.	Forfar.
Ross.	Bauff.	Perth.
Inverness.	Aberdeen.	Fife.

The monuments are in no instance found in the barren mountainous districts, which are often so prolific in remains of an earlier period, but in the fertile lands near the coast or in the great river valleys. The western or inland parts of Sutherland, Ross, and Inverness are entirely destitute of

¹ If the number of places where stones of each of the three classes occur be added together, it will not give the correct total of places, because stones of more than one class often occur at the same place.

sculptured stones, and all the examples are situated along the east-line beginning at the entrance to Strathnaver, following it eastwards to Duneansby Head and then southwards round the shores of the Dornoch and Moray Firths. In Nairn, Elgin, Banff, and Aberdeen they occur much further inland, chiefly in the valleys of the rivers Findhorn, Spey, Deveron, Don, and Dee; and in Kincardine, Forfar, Perth, and Fife as far inland as the foot of the mountains.

The centre from which the symbol-bearing monuments originated, and the direction in which they spread, is shown by arranging the counties in order according to the number of specimens in each, thus:—

CLASS I.		CLASS II.	
	No. of Stones.		No. of Stones.
Aberdeen,	41	Forfar,	32
Sutherland,	15	Perth,	16
Inverness,	14	Ross,	5
Elgin,	12	Aberdeen,	5
Forfar,	7	Caithness,	2
Ross,	6	Elgin,	2
Banff,	6	Fife,	2
Kincardine,	6	Sutherland,	1
Perth,	5	Nairn,	1
Shetland,	3	Banff,	1
Caithness,	3	Kincardine,	1
Orkney,	2		
Hebrides,	2		
Fife,	1		

It appears from the above, the range of Class II. is more restricted than that of Class I.; there being no stones belonging to the former in Shetland, Orkney, the Hebrides, or Inverness.

TOTAL NUMBER OF STONES BELONGING TO BOTH CLASS I. AND CLASS II.

Aberdeen,	46	Kincardine,	7
Forfar,	39	Caithness,	5
Perth,	21	Shetland,	3
Sutherland,	16	Fife,	3
Inverness,	14	Orkney,	2
Elgin,	14	Hebrides,	2
Ross,	11	Nairn,	1
Banff,	7		

The geographical distribution of archæological remains does not give any clue as to their age, unless it can be shown that the area over which they are spread corresponds exactly with that occupied by some particular race, the date of whose arrival in and departure from that area is known. In the present case the stones belonging to Class I. are found chiefly, although not exclusively, in the portion of Scotland formerly inhabited by the Northern Picts; and the stones belonging to Class II. chiefly, although not exclusively, in the portion of Scotland formerly inhabited by the Southern Picts. These two districts are separated from each other by the Grampian Mountains, or the Mounth as the range was then called.

One isolated example of the symbols only occurs in the country of the Niduari Picts, on a natural rock surface at Anwoth, in Kirkeudbrightshire. The evidence of the geographical distribution therefore tends to prove that the symbols are specially Pictish, and not the invention of the Scots of Dalriada, the Britons of Strathclyde, or the Angles of Bernicia, who inhabited the remainder of what is now the kingdom of Scotland. If the frequency of the occurrence of the monuments is any criterion of their origin, then the table that has been given clearly points to Aberdeenshire as the home of the stones belonging to Class I. and Forfarshire as that of the stones belonging to Class II. From some centre¹ in these counties they may have gradually spread northwards and southwards.

The geographical distribution of the monuments does not appear to throw much light on the question of the relative ages of those belonging to Class I. and to Class II. If the symbols were applied indiscriminately to both classes of monuments during the same period, the table of totals of symbol-bearing stones in each county arranged in order of frequency points to Aberdeenshire as the district where they originated.

If, however, as seems more probable, the rude pillars with incised symbols are earlier than the elaborately ornamented upright slabs with symbols carved in relief, the tables then seem to indicate that after the symbols ceased to be used to any great extent on rude pillars in Aberdeen, Sutherland, Inverness, and Elgin, they were applied extensively to upright cross-slabs in Forfar, Perth, and Ross. This will be evident by

¹ Perhaps Inverury, in Aberdeenshire, and Meigle on the borders of Perthshire and Forfarshire.

observing that the first-mentioned counties are at the top of the first column in the table and at the bottom of the second column.

The geographical distribution of the stones belonging to Class I. and Class II. very decidedly negatives the theory that the symbols can have any connection with the Columban Christianity emanating from Iona.

The nearest locality to Iona where a symbol-bearing stone belonging to Class I. occurs is on Pabbay, one of the Barra Islands, 60 miles north-west of Iona. This is also the most westerly locality in Scotland where a stone of Class I. has been found. The only other one known to have existed in the Hebrides is the slab from Benbecula, now in the Edinburgh Museum of Antiquities.

With these two exceptions the whole of the western coast of Scotland seems to be entirely destitute of monuments with symbols. If a circle with a hundred miles radius be struck with Iona as the centre, the symbol-stones of Pabbay and Benbecula will be the only two well within it, and in other directions it will nearly cut through the following localities on the extreme border of the symbol country, Drumbuie in Glenurquhart, Strowan in Perthshire, and Fowlis Wester near Crieff.

Roughly speaking, the portion of Scotland where the symbol-stones are found lies north of lat. 56° and east of long. $4^{\circ} 30'$ W. of Greenwich, on a line passing through Dingwall and Kilmarnock.

III.—THE POSITIONS OF THE MONUMENTS.

The positions now occupied by the three classes of monuments are shown in the followings tables :—

IN OPEN FIELDS, BY ROAD-SIDES, OR IN PUBLIC PLACES.

Class I.	Class II.	Class III.
Edderton, No. 1. Rosskeen. Dunnachton (?). Knoeknagael. Lynchurn. Upper Maubean. Balneilean. North Redhill. Criehie. Fyvie, No. 1. Huntly, No. 1. Insch. Rhyrie, Nos. 1 to 4. Aberlemno, No. 1. Dumichen. Keillor. Bruceston. Cargill. Lindores.	Shandwick. Maiden Stone. Aberlemno, No. 3. Balluderon. Cossins. Glamis, No. 1. Fowlis Wester.	Wester Delnies. Forres. Crieff. Invermay. Dogtown. Sauchope. Barrochan. Newton Woods. Stanlie. Lesmahagow. Mansfield. Thornhill.

IN PRIVATE HOUSES OR GROUNDS.

Class I.	Class II.	Class III.
Sandside. Thurso. Strathpeffer. Balblair (now at Moniaek). Drumbuie, Nos. 1 and 2 (now at Balmacaan). Inverness, Nos. 1 and 2. Torgorn (now at Moniaek). Burghead, Nos. 2 and 4. Aradilly. Clatt (now at Knoekespoek). Logiemar. Daviot (now at Mounie). Drimmies.	Ulbster (now at Thurso). Hilton of Cadboll (now at Invergordon). Tarbet, No. 1 (now at Invergordon). Glenferness. Brodie. Monymusk. Glamis, No. 2. Kinell. Strathmartin, Nos. 2, 3, 5, and 6. Woodwray (now at Abbotsford).	Tarbet, Nos. 2 to 5 and 8 to 10 (now at Invergordon). Aehareidh. Altyre. Burghead, Nos. 7, 11, and 12. Aboyne. Camuston. Strathmartin, Nos. 7 to 13 (now at Baldovan). Abernethy, Nos. 2 to 4. Carpow (now at Mugdrum). Dupplin. Forteviot, Nos. 3 to 5. Mugdrum.

IN PRIVATE HOUSES OR GROUNDS (*continued*).

Class I.	Class II.	Class III.
Keith Hall. Leys of Dummuies (now at Huntly). Logie Elphinstone, Nos. 1, 2, and 3. Newbiggin Leslie. Newton in the Garioch. Mill of Newton (now at Tillypronie). Park (Deeside). Pereylieu (now at Cransmill). Rothiebrisbane. Tillytarment. Formaston (now at Aboyne). Arbirlot. Linlathen. Strathmartin, No. 1. Abernethy. Dunkeld.	Dunfallandy. Gask (now at Moneriefte). Largo (now at Polton).	Rothesay. Roseneath. Arthurlee. Jordanhill. Hamilton. Kirkcolm (now at Corsewell). Monreith, No. 1. Borthwick, Nos. 2 and 3 (now at Crookston). Aberlady (now at Carlowrie).

IN MUSEUMS.

Class I.	Class II.	Class III.
<i>Edinburgh</i> — Uyea. Shetland (locality unknown). Firth. S. Ronaldsay. Keiss. Does. Findlarig. Benbecula. Burghead, No. 1. Grantown. Kintore, Nos. 2 and 3. Edinburgh. <i>Dunrobin</i> — Clynekirkton, Nos. 1 and 2. Clynemilton. Craigton. Dunrobin. Kintradwell, Nos. 1 to 4. Little Ferry Links, Nos. 1 to 4.	<i>Edinburgh</i> — Kingoldrum, No. 1. Monifieth, Nos. 1, 2, and 3. Strathmartin, No. 4. Murthly. Abernethy. Scoonie. <i>Dunrobin</i> — Golspie. <i>Thurso</i> — Skinnnet. <i>Montrose</i> — Farnell. Inchbrayock, Nos. 1 to 3.	<i>Edinburgh</i> — Bressay. Pupil. Flotta. Rosemarkie, Nos. 3 and 4. Tarbet, Nos. 6 and 7. Berneray. Kilbar. Burghead, No. 8. Kingoldrum, Nos. 2 and 3. Lethnott. Monifieth, No. 4. Dull. Forteviot, No. 2. Tullibole. Glenlucc, No. 1. Monreith, No. 2. Craiglemine. Mains of Penninghame. Knock. Mochrum. Whithorn. Borthwick, No. 1.

IN MUSEUMS (*continued*).

Class I.	Class II.	Class III.
<p><i>Inverness</i>— Ardross, Nos. 1 and 2. <i>Elgin</i>— Burghead, Nos. 3 and 6. Drainie, No. 1. <i>British Museum</i>— Burghead, No. 5.</p>		<p><i>Edinburgh</i> (<i>continued</i>)— Lasswade. Liberton. Coldingham. Gattonside. Hoddam, Nos. 1 and 2. Drainie. <i>Dunrobin</i>— Clynekirkton, No. 3 Collieburn. Lothbeg. <i>Elgin</i>— Drainie, Nos. 2 to 13. <i>St Andrews</i>— St Andrews, Nos. 1 to 17. Dunino. <i>Glasgow</i>— Mountblow. <i>Thornhill</i>— Closeburn. Durrisddeer. Glencairn. Penpont, Nos. 1 and 2.</p>

IN CHURCHES OR CHURCHYARDS.

Class I.	Class II.	Class III.
<p>Dingwall. Congash, Nos. 1 and 2. Inverallan. Birnie. Knockando, Nos. 1 and 2. Inveravon, Nos. 1 to 3. Bourtie. Old Deer. Dyce, No. 1. Fetter Angus. Inverury, Nos. 1 to 4. Kinellar. Kintore, No. 1. Rhynie, Nos. 5 and 6. Tullich. Tynie. Strowan.</p>	<p>Nigg. Rosemarkie, No. 1. Elgin. Dyce. Migvie. Fordoun. Aberlemno, No. 2. Eassie. Kettins. Kirriemuir, Nos. 1 and 2. St Vigean's, Nos. 1 to 6. Alyth. Logierait. St Madoes, No. 1. Meigle, Nos. 1 to 8. Rossie.</p>	<p>Reay. Farr. Edderton, No. 2. Kincardine. Rosemarkie, Nos. 2 and 3. Tarbet, No. 3. Canna. Birnie, Nos. 2 to 5. Burghead. Fyvie, No. 3. Aldbarr, No. 1. Benvie. Brechin, No. 1 (now at Aldbarr). Brechin, No. 2. Invergowrie, Nos. 1 and 2. Kirriemuir, Nos. 3, 4, and 5.</p>

IN CHURCHES OR CHURCHYARDS (*continued*).

Class III. (*continued*).

Menmuir.	Inchcolm, Nos. 1 and 2.	Millport.
St Vigean's, Nos. 7 to 29.	Tullibole.	Inchinnan, Nos. 1 to 3.
Dunblane, Nos. 1 and 2.	Archcattan.	Govan, Nos. 1 to 34.
Dunkeld, Nos. 2 and 3.	Eilan Mòr.	Glenluce, No. 2.
Dunning.	Iona, Nos. 1 to 13.	Kirkinner, Nos. 1 and 2.
Forteviot, No. 1.	Keills.	Kirkmaiden.
St Madoes, No. 2.	Kildalton.	Whithorn, Nos. 1 to 12.
Meikle, Nos. 9, 11 to 13, and 19 to 30.	Kilfinan.	Wigtown.
Abercromby, Nos. 1 to 5.	Kilmartin.	Minnigaff.
St Andrews, Nos. 18 to 21.	Kilneave.	Abercorn, Nos. 1 and 2.
Crail.	Riskbuie.	Jedburgh, Nos. 1 to 4.
	Soroby.	Wamphray.
	St Ninian's, Sanda.	

IN CAVES.

Class III.

St Kieran's, Kintyre.	St Ninian's, Glasserton.
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LOST.

Class I.	Class II.	Class III.
Kirtomy. Stonehaven, Nos. 1 to 6. Baggerton (?).		South Garth. Strathmartin, No. 7A. Forteviot, No. 6. Meikle, Nos. 10 and 14 to 19. Inverkeithing.

SUMMARY.

	Class I.	Class II.	Class III.	TOTALS.
In Open Field, by Road-sides or in Public Places,	22	7	12	31
In Private Houses or Grounds,	34	16	39	89
In Museums,	34	13	68	115
In Churches or Churchyards,	25	29	168	222
In Caves,	—	—	2	2
Lost,	8	—	11	19

It will be noticed that nearly half the total number of stones are still in churches, or churchyards, and this number would be considerably augmented if there were added to it all the stones now in museums or on private property which have been removed from ecclesiastical sites. Many of the monuments at present standing in the open fields may have had churches near them at one time, all traces of which have been lost since.

The sites on which cross-slabs exist are known to have been used as places of worship in former times, and are dedicated to early Celtic saints. On the whole, it is quite obvious that the associations of the monuments are Christian rather than Pagan.

LIST OF MONUMENTS REMOVED FROM THEIR ORIGINAL SITES.

CLASS I.

<i>Original Site.</i>	<i>Present Position.</i>
Firth.	Edinburgh.
S. Ronaldsay.	"
Thurso.	Copenhagen.
Keiss.	Edinburgh.
Clynekirkton, Nos. 1 and 2.	Dunrobin.
Clynemilton.	"
Craigton, Nos. 1 and 2.	"
Kintradwell, Nos. 1 to 4.	"
Little Ferry Links, Nos. 1 to 4.	"
Ardross, Nos. 1 and 2.	Inverness.
Balblair.	Moniack.
Dores.	Edinburgh.
Drumbuie, Nos. 1 and 2.	Balmacalan.
Findlarig.	Edinburgh.
Torgorm.	Moniack.
Benbecula.	Edinburgh.
Burghead, No. 1.	"
" Nos. 3 to 6.	Elgin.
" No. 5.	London.
Drainie, No. 1.	Elgin.
Grantown.	Edinburgh.
Clatt.	Knockespoek.
Leys of Dummuies.	Huntly.
Mill of Newton.	Tillypronie.
Percylieu.	Cransmill.

LIST OF MONUMENTS REMOVED FROM THEIR ORIGINAL SITES (*continued*).

CLASS II.

<i>Original Site.</i>	<i>Present Position.</i>
Skinnet.	Thurso.
Ulster.	"
Golspie.	Dunrobin.
Hilton of Cadboll.	Invergordon.
Tarbat, No. 1.	"
Formaston.	Aboyne.
Farnell.	Montrose.
Inchbrayock, Nos. 1 and 2.	"
" No. 3.	Craig.
Kingoldrum, No. 1.	Edinburgh.
Monifieth, Nos. 1 to 3.	"
Strathmartin, No. 4.	"
" Nos. 3, 5, and 6.	Baldovan.
Woodwray.	Abbotsford.
Gask.	Moncrieffe.
Murthly.	Edinburgh.
Scoonie.	"
Largo.	Polton.

CLASS III.

Bressay.	Edinburgh.
Papil.	"
Clynekirkton, No. 3.	Dunrobin.
Collieburn.	"
Lothbeg.	"
Rosemarkie, Nos. 3 and 4.	Edinburgh.
Tarbat, Nos. 6 and 7.	"
" Nos. 2 to 5, and 8 to 10.	Invergordon.
Berneray.	Edinburgh.
Kilbar.	"
Burghead, No. 8.	"
" No. 9.	Elgin.
Drainie, Nos. 2 to 13.	"
Brechin (?).	Aldbarr.
Kingoldrum, Nos. 2 and 3.	Edinburgh.
Lethnott.	"
Monifieth, No. 4.	"
Strathmartine, Nos. 7 to 13.	Baldovan.
Abernethy, Nos.	Newburgh.
Carpow.	Mugdrum.
Dull.	Edinburgh.
Forteviot, No. 2.	"
Tullibole.	"
Dunino.	St Andrews.
Mountblow.	Glasgow.
Glenluce, No. 1.	Edinburgh.

LIST OF MONUMENTS REMOVED FROM THEIR ORIGINAL SITES (*continued*).CLASS III. (*continued*).

<i>Original Site.</i>	<i>Present Position.</i>
Kirkcolm.	Corsewell.
Monreith, No. 2.	Edinburgh.
Mochrum.	”
Whithorn.	”
Mains of Penninghame.	”
Craiglemine.	”
Knock.	”
Borthwick, No. 1.	”
” Nos. 2 and 3.	Crookston.
Lasswade.	Edinburgh.
Liberton.	”
Aberlady.	Carlowrie.
Coldingham.	Edinburgh
Gattonside.	”
Closeburn.	Thorubill.
Durrisdeer.	”
Glencairn.	”
Penpont, Nos. 1 and 2.	”
Hoddam, No. 1.	Edinburgh.

SUMMARY.

	Class I.	Class II.	Class III.
Number of Stones removed from their Original Sites,	24	24	67

The only justifiable reasons for removing a monument from the position in which it is found are either that it may be better protected from injury or that it may be made more easily accessible for purposes of study. There can, however, be no possible excuse for taking a stone away from its original locality in order to make it a mere ornament for a garden, as has frequently been done. The Ulbster stone, for instance, has been taken from a church 20 miles away and erected within the grounds of Thurso Castle in the most exposed position possible on the top of a high, artificial mound, where it is rapidly decaying from the effects of the weather.

Many other cases might be cited where the stones have been transported from one place to another in a different part of the country, such as the Woodwray stone now at Abbotsford, the Largo stone now at Polton, the Gask stone now at Monerieffe House, the Hilton and Tarbat stones now at Invergordon, and the Aberlady stone now at Carlowrie.

IV.—FORMS AND DIMENSIONS OF THE MONUMENTS.

The following tables show the various different forms of monuments, the numbers of specimens of each kind, their state of preservation, and the dimensions of the perfect examples:—

CLASS I.

STONES IN THEIR NATURAL STATE AND NOT SHAPED ARTIFICIALLY.

ERECT PILLARS.

	"	"	"	"		"	"	"	"		
Craigton, No. 1,	6·6	×	2·2	×	1·6	Kintore, No. 1,	3·8	×	1·10	×	10
Edderton, No. 1,	10·3	×	3·6	×	1·6	Logie Elphinstone, No. 2,	4·6	×	2·6	×	1·6
Rosskeen,	6·0	×	1·6	×	1·6	Newton,	6·9	×	2·0	×	1·4
Balblair,	4·6	×	2	×	1	Rhynie, No. 1,	5·7	×	3·0	×	1·6
Knocknagael,	6·9	×	7·2	×	1·1½	Aberlemno, No. 1,	6·0	×	3·0	×	9
Inveravon, No. 1,	4·9	×	3·0	×	6	Dunnichen,	4·8	×	1·4	×	1·0
Crichtie,	5·3	×	3·6	×	1·0	Keillor,	6·4	×	2·9	×	10
Huntly,	3·3	×	2·6	×	1·6	Bruceton,	4·6	×	3·0	×	11
Insch,	6·6	×	3·3	×	1·6						

SLABS.

(Complete, or nearly so.)

	"	"	"	"		"	"	"	"		
Sandness,	1·3	×	9	×		Arndilly,	2·6	×	2·4	×	
Sandside,	4·8½	×	1·11½	×	3½	Inveravon, No. 2,	5·0	×	1·6	×	
Thurso,	2·3	×	2·2	×		Old Deer,	6·0	×	2·6	×	
Clynekirkton, No. 1,	4·3	×	1·11	×	4½	Dyce,	5·6	×	2·3	×	
" No. 2,	4·0	×	1·5	×	2½	Fetter Angus,	3·8	×	2·7	×	
Dunrobin,	3·8	×	1·11	×	5	Inverury, No. 4,	4·0	×	2·6	×	10½
Kintra lwell, No. 1,	3·2	×	1·1	×	3½	Keith Hall,	5·0	×	2·0	×	
" No. 3,	3·8	×	2·2	×	3½	Kinellar,	3·3	×	1·10	×	
Dingwall,	4·3	×	1·8	×	8	Logie Elphinstone, No. 1,	3·6	×	2·5	×	10
Strathpeffer,	3·8	×	2·0	×	10	" No. 3,	3·6	×	2·4	×	7
Congash, No. 1,	3·2	×	2·2	×	10	Newbiggin Leslie,	2·1	×	1·3	×	7
" No. 2,	1·10	×	1·4½	×	7	Mill of Newton,	3·0	×	2·0	×	1·2
Drumbuie, No. 1,	2·6	×	2·6	×		Park,	2·5	×	1·3	×	1·1
" No. 2,	3·8	×	2·10	×		Rhynie, No. 5,	4·9	×	2·6	×	9
Benbecula,	3·0	×	2·6	×		Rothie Brisbane,	2·4	×	1·9	×	1·2
Pabbay,	3	×	1·4	×		Tillytarment,	3·8	×	1·7	×	
Birnie,	3·6	×	2·3	×	1·9	Tullich,	5·9	×	1·9	×	5
Burghhead, No. 1,	2·3	×	1·5	×		Tyrie,	3·8	×	2·4	×	
" No. 2,	1·7	×	1·0	×	4	Arbirlot,	5·6	×	2·9	×	
" No. 3,	1·9	×	1·4	×	7	Strathmartine, No. 1,	3·0	×	3·0	×	6
" No. 5,	1·9	×	1·9	×	3	Abernethy, No. 1,	2·9	×	1·10	×	
Grantown,	4·0	×	10	×	9	Cargill,	2·10	×	2·6	×	
Knockando, No. 1,	5·0	×	2·0	×		Dunkeld,	3·6	×	1·9	×	
" No. 2,	6·3	×	2·6	×		Lindores,	3·10	×	1·10	×	

SLABS,
(Broken.)

Firth.
S. Ronaldsay.
Keiss.
Clynemilton.
Craigton, No. 2.
Kintradwell, No. 2.
Findlarig.
Lynchurn.
Drainie.
Upper Maubean.
Bourtrie.



Corrachree.
Daviot.
Fyvie, Nos. 1 and 2.
Leys of Dummies.
Invernry, Nos. 1 to 3.
Kintore, Nos. 2 and 3.
Percylieu.
Rhynie, Nos. 2 to 4, and 6.
Lindlathen.
Strowan.

SLABS,
(Small Fragments.)

Kintradwell, No 4.
Little Ferry Liuks, Nos. 1 to 4.
Ardross, Nos. 1 and 2.
Inverness, Nos. 1 and 2.



Moniack.
Inveravon, No. 3.
Stonchaven, Nos. 1 to 6.

SUMMARY.

Erect Pillars,	17	Slabs, broken,	28
Slabs, complete,	48	„ fragments,	17

Most of the pillar stones still occupy their original positions, and many of them are known to the inhabitants of the district by distinctive local names, as, for instance, the “Clach Berach” at Edderton; the “Clach Mhiarlich” at Rosskeen; the standing stones of Strathbogie at Huntly; and the “Craw Stane” at Rhynie. The tallest of these pillars is the one at Edderton, the height of which exceeds 10 feet. It is quite of the type of the Pagan Menhir. The stones at Craigton, Rosskeen, Knoeknagael, Inch, Newton, Aberlemno, and Keillor are all over 6 feet high; those at Crichtie and Rhynie over 5 feet high; and the remainder average 4 feet high. The stone at Knoeknagael presents the largest superficial area on the broad face amounting to about 48 square feet, but in other cases the width varies from 2 feet to 3 feet 6 inches. The thickness is usually about one-half the width. The pillars in most instances taper towards the top.

The slabs are nearly all approximately rectangular in shape, and the longest dimension seldom exceeds 4 feet. The average size is 3 feet 6 inches long by 2 feet wide by 6 inches thick. The relative proportions of the dimensions of the stones at Birnie and at Grantown are exceptional, the shape of the former approximating to a cubical block, and that of the

latter to a four-sided prism. It is evident that stones of slab shape (*i.e.*, with one dimension much smaller than the other two) were specially chosen to carve the symbols upon, but there is frequently nothing to indicate whether the slabs were intended to be placed horizontally or vertically. In a few cases the symbols are found on both sides,¹ which would favour the idea that in these instances at any rate they were intended to stand upright.

The two stones at Congash, which seem to be *in situ*, are placed vertically on each side of the entrance to an enclosure containing an ancient chapel.

CLASS II. AND CLASS III.

STONES SHAPED ARTIFICIALLY.

UPRIGHT CROSS-SLABS.

(Complete, or nearly so.)

CLASS II.

	' "	' "	' "		' "	' "	' "
Skinnet,	7·6	× 2·2	× 7	Glamis, No. 2,	8·0	× 5·9	×
Ulster,	5·0	× 3·0	× 7·6	Inchbrayock, No. 1,	2·5	× 1·7	× 2
Golspie,	6·0	× 2·8	× 6	" No. 2,	1·0	× 1·1	× 3
Hilton of Cadboll,	7·8	× 4·7	× 9½	Kettins,	9·2	× 3·8	× 10
Nigg,	7·3	× 3·5	× 5	Kirriemuir, No. 1,	2·6	× 1·7	×
Rosemarkie, No. 1,	8·6	× 2·6½	× 7½	" No. 2,	3·0	× 1·10	× 4
Shandwick,	9·0	× 3·3	× 8½	Monifieth, No. 1,	3·0	× 1·4	×
Glenferness,	5·6	× 2·2	× 4	" No. 2,	1·7	× 1·3	×
Brodie,	6·4	× 3·5	× 5	St Vigean's, No. 1,	5·6	× 1·9	× 6½
Elgin,	6·10	× 3·0	× 7	Woodwray,	5·8	× 3·4	× 5
Mortlach,	6·0	× 1·10½	× 8	Alyth,	4·6	× 1·6	× 6
Dyce, No. 2,	4·6	× 2·0	×	Dunfallandy,	5·0	× 2·2	× 5
Maiden Stone,	10·0	× 3·0	× 1·0	Fowlis Wester,	10·4	× 2·9	× 5
Migvie,	6·0	× 2·5	× 1·1	Logierait,	3·3	× 1·10	×
Menymusk,	7·0	× 2·6	×	St Madoes, No. 1,	5·6	× 3·0	× 8
Fordoun,	5·3	× 2·11	× 4	Meikle, No. 1,	6·0	× 3·4½	× 7
Aberlemno, No. 1,	7·6	× 3·10	× 11	" No. 2,	8·0	× 3·3	× 6
" No. 2,	9·3	× 3·4	× 11	" No. 4,	5·0	× 2·11	× 7½
Cossins,	7·9	× 2·4	× 10	" No. 5,	2·6	× 1·8	× 6½
Eassie,	6·8	× 3·4	× 9	Rossie,	5·4	×	× 1·0
Farnell,	6·10	× 2·3½	× 5	Largo,	6·6	× 2·6	× 6
Glamis, No. 1,	5·0	× 2·5	×	Scoonie,	3·6	× 2·4	× 4½

¹ At Kintore, Rosskeen, Dingwall.

CLASS III.

Bressay,	3·9 × 1·4 × 13 ³ / ₄	Dunblane, No. 1,	6·2 × 2·8 × 8
Papil,	6·10 × 1·7 ¹ / ₂ × 2 ¹ / ₂	Dunkeld, No. 2,	4·10 × 2·6 × 1·1 ¹ / ₂
Reay,	6·4 × 2·3 ¹ / ₂ × 3 ¹ / ₂	Dunning,	3·11 × 1·8 ×
Clynekirktohl, No. 3,	1·0 × 1·1 × 4 ¹ / ₂	Meikle, No. 23,	2·7 × 1·9 × 5
Farr,	7·6 × 2·1 × 9 ¹ / ₂	Abereromby, No. 2,	3·5 × 1·9 ×
Kilbar	4·5 ¹ / ₂ × 1·3 ¹ / ₂ × 10	„ No. 3,	4·2 × 1·5 ×
Wester Delnies,	5·6 × 4·2 × 1·1	St Andrews, No. 2,	4·8 × 1·6 ×
Altyre,	11·3 × 2·10 × 8	Craik,	6·3 × 2·5 ×
Forres,	20·0 × 3·9 × 1·2	Sauehope,	6·0 × 2·9 ×
Aboyne,	6·3 × 3·1 × 1·0	Ardochattan,	6·6 ¹ / ₂ × 2·3 × 6
Aldbar,	5·6 × 1·10 ¹ / ₂ × 5	Sanda,	7 × 2 ×
Benvie,	3·0 × 1·11 × 5	Rothsay,	6·0 × 1·8 × 5
Invergowrie, No. 1,	2·9 × 1·9 ×	Roseneath,	1·6 × 1·9 × 6
Kirriemuir, No. 5,	1·6 × 1·4 × 3 ¹ / ₂	Kirkcolm,	5·6 × 2·0 ×
Menmuir,	3·5 × 1·6 ¹ / ₂ × 6	Minnigaff, No. 1,	2·10 × 9 ¹ / ₂ × 7 ¹ / ₂
Crieff,	6·3 × 1·11 × 6 ¹ / ₂	„ No. 2,	4·6 × 1·5 × 6

UPRIGHT CROSS-SLABS.

(Broken.)

CLASS II.

- Tarbet, No. 1.
- Balluderon.
- Inehbrayoek, No. 3.
- Kingoldrum, No. 1.
- Monifieth, No. 3.
- Strathmartine, No. 3.
- St Vigean's, No. 2.
- Gask.
- Meikle, Nos. 3, and 5 to 7.

CLASS III.

- Collieburn.
- Brechin, No. 1.
- Kirriemuir, Nos. 3 and 4.
- Lethmott.
- St Vigean's, Nos. 7 to 11, and 13.
- Carpow.
- Forteviot, No. 1.
- St Madoe's, No. 2.
- Meikle, Nos. 17, 19, 21, and 28.
- Abereromby, No. 1.
- St Andrews, Nos. 3 to 5, 7 to 13, 15, and 16.
- Mansfield.

CROSS-SLABS.

(Fragments.)

CLASS II.

- Strathmartine, Nos. 4 to 6.
- St Vigean's, Nos. 3 to 6.
- Meikle, No. 8.

CLASS III.

- Lothbeg.
- Tarbet, Nos. 2 to 11.
- Achareidh.
- Birnie, Nos. 2 to 5.
- Burghead, Nos. 7 to 10, and 12.
- Drainie, Nos. 2 to 13.
- Strathmartine, Nos. 8 to 13.
- St Vigean's, Nos. 17 to 28.
- Abernethy, Nos. 2 and 3.
- Forteviot, Nos. 3 to 6.
- Invermay.
- Meikle, Nos. 13 to 16, 17 to 20, 27, 29, and 30.
- Abereromby, Nos. 4 and 5.
- St Andrews, No. 17.

ERECT WHEEL-CROSSES.

(Complete, or nearly so.)

CLASS III.

	" " " "		" " " "
Glenluce, No. 1, . . .	4·9 × 1·3 ×	Whithorn, No. 1, . . .	4·10 × 2·2 × 3½
Kirkcinner, No. 1, . . .	4·9 × 2·0 × 3	„ No. 3, . . .	2·11 × 1·3½ × 3½
Monreith House, . . .	7·6 × 1·6 × 6	„ No. 4, . . .	2·9 × 1·3 × 4
St Ninian's Cave, . . .	2·6 × 1·0 ×		

ERECT WHEEL-CROSSES.

(Broken.)

CLASS III.

<i>Shafts.</i>	<i>Heads.</i>
Monreith, No. 2.	Whithorn, Nos. 9 and 10.
Kirkcinner, No. 2.	
Whithorn, Nos. 2, and 5 to 10.	
Wigtown.	
Mains of Penninghame.	

ERECT CROSSES.

(Complete, or nearly so.)

CLASS III.

" " " "	" " " "		
Canna,	7·0 × 2·0 × 10	Kilmartin,	5·6 × × 7
Camuston,	6·6 × 2·9 × 8	Kilneave,	9·10 × 3·4 × 2½
Dupplin,	8·6 × 3·2 × 1·1	Soroby,	4·0 × 2·8 ×
Eilan Mór,	5·7 × 1·11 × 3½	Barrochan,	8·3 × 3·0 × 9½
Iona, No. 1,	14·3 × 3·11 × 10	Hamilton,	5·0 × 2·6 × 11
Keills,	7·4 × 1·10 × 6½	Thornhill,	9·2 × 1·6 × 8
Kildalton,	8·6 × 4·6 × 8		

ERECT CROSSES.

(Broken.)

CLASS III.

<i>Shafts.</i>	<i>Heads.</i>
Monifieth, No. 4.	Strathmartine, No. 7.
Abernethy, No. 4.	St Vigean's, Nos. 9 and 15.
St Andrews, Nos. 14 and 19.	St Andrews, No. 6.
Iona, Nos. 2 to 4, 9 and 13.	Iona, Nos. 8, 11, and 12.
Mountblow.	Lesmahagow.
Arthurlee.	Lasswade.
Jordanhill.	Durrisdeer.
Newton Woods.	Glencairn.
Stanlie (?).	Penpont.
Abercorn.	Coldingham.
Borthwick.	Gattonside.
Aberlady.	Jedburgh.
Carlowrie.	Closeburn.
Wamphray.	Hoddam.
Rothsay, No. 2.	

CROSS-BASES.

Iona, Nos. 1 and 2. | Soroby. | Barrochan.

RECUMBENT MONUMENTS.

(Complete, or nearly so.)

CLASS III.

HOG-BACKED STONES.

Meigle, No. 25,	4·9 × 2·0 × 1·1	Govan, No. 11,	" " " "
St Vigean's, No. 29,	4·11 × 1·9 × 6	" No. 12,	" " " "
Govan, No. 2,	6·6 × 2·4 × 11	Abercorn,	6·5 × 1·9 × 1·9
" No. 3,	6·8 × 2·5 × 1·3	Incheolm,	5·2 × 1·8 × 1·1
" No. 10,	7·8 × 2·4 × 2·0	Brechin, No. 2,	4·9 × 1·6 × 9

RECTANGULAR BODY-STONES.

Kincardine,	5·0 × 1·2 × 1·8	Meigle, No. 26,	5·0 × 1·7 × 9
St Vigean's, No. 8 (?),	5·6 × 10 ×	Inchinnan, No. 3,	4·6 × 1·6 × 10
" No. 14,	5·1 × 1·6 × 4	Govan, No. 7,	5·6 × 1·9 ×
Meigle, No. 9,	5·11 × 1·0 × 1·1	" No. 13,	4·5 × 2·3 ×
Meigle, No. 11,	5·8 × 2·3 × 1·7	" No. 23,	" No. 31,
" No. 12,	4·9 × 1·5 × 11	" No. 31,	5·4 × 2·1 ×
" No. 22,	2·8 × 10 × 3½	Strathmartine, No. 2,	3·6 × 1·8 ×

CROSS-SLABS.

Inchinnan, No. 1.
 Govan, Nos. 6, 8, 9, 14 to 22, 25 } Average 6·0 × 1·9 × 6.
 to 30, and 30 to 34.

ALTAR TOMBS.

Flotta. | St Andrews, No. 1.

SARCOPHAGUS.

Govan, No. 1.

ARCHITECTURAL DETAILS.

Brechin. | Forteviot.

SLABS.

(Original Use and Position Doubtful.)

Rosemarkie, No. 2.	Dunblane, No. 2.
Berneray.	Meigle, No. 10.
Burghead, No. 11.	Millport.
Fyvie, No. 3.	Govan, No. 24.
Kinell.	Kirkmaiden.
Murthly.	

SUMMARY.

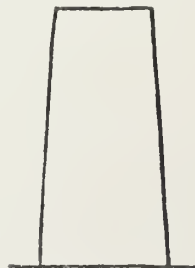
	Class II.	Class III.
Upright Cross-Slabs, complete,	44	32
" " broken,	12	32
" " fragments,	8	75
Erect Wheel-Crosses, complete,	7
" " shafts,	10
" " heads,	2
Erect Crosses, complete,	13
" " shafts,	20
" " heads,	17
Recumbent Monuments, hog-backed,	10
" " rectangular,	14
" " cross-slabs,	24
Altar Tombs,	2
Sarcophagus,	1
Architectural Details,	2
Slabs,	11

The tables show very conclusively that the predominant type of Christian monument in Scotland exhibiting Celtic forms of ornament is the upright cross-slab, as out of a total of 336 there are 203 of this kind in various states of preservation. It makes no difference to the shape of the monument whether it belongs to Class II. or Class III., *i.e.*, whether it has symbols upon it or not.

The most common form of the upright cross-slab is an approximately rectangular mass of stone, the height of which is generally the greatest



No. 1.—Rectangular Slab.



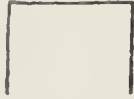
No. 2.—Slab Tapering towards the Top.



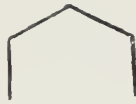
No. 3.—Slab Tapering towards the Bottom.

dimension, the width from half to quarter the height, and the thickness much smaller than either. This shape is varied in two ways—(1) by making the slab taper towards the top, or towards the bottom, by gradually reducing the width, or both the width and thickness; and (2) by making the top of the slab pointed or rounded.

The amount of taper is usually very slight and towards the top, but as examples of slabs which are noticeably wider at the top instead of the bottom, the stones at Sauchope, Inchbrayock, No. 1, and Invergowrie, No. 1, may be mentioned.



No. 4.—Square Top.



No. 5.—Pointed Top.



No. 6.—Rounded Top.

Slabs with pointed or pedimented tops occur at

Nigg.
Aberlemno, No. 1.

Farnell.
Meikle, Nos. 3, 19.

Slabs with rounded tops occur at

Papil.
Kirriemuir, No. 1.

Meikle, Nos. 2, 4, 7, 17.

The sizes of the upright cross-slabs vary considerably, the tallest (at Forres) being 20 feet high and the shortest (at Clynekirkton, No. 3) not more than 1 foot high.

The widths of the stones at Hilton of Cadboll (4 feet 7 inches), and at Glamis, No. 2 (5 feet 9 inches), are quite exceptional, the proportion relatively to the height being generally less than half.

In the following list the principal cross-slabs are arranged in order according to their heights:—

20 feet and over—

Forres.

11 feet and over—

Altyre.

10 feet and over—

Maiden Stone.

Fowlis Wester.

9 feet and over—

Shandwick.

Aberlemno, No. 2.

Kettins.

8 feet and over—

Rosemarkie, No. 1.

Glamis, No. 2.

Meikle, No. 2.

7 feet and over—

Skinnet.

Hilton of Cadboll.

Nigg.

Monymusk.

Aberlemno, No. 1.

7 feet and over (continued)—

Cossins.

Farr.

6 feet and over—

Golspie.

Brodie.

Elgin.

Mortlaeh.

Migvie.

Eassie.

Farnell.

Meikle, No. 1.

Largo.

Papil.

Reay.

Aboyne.

Crieff.

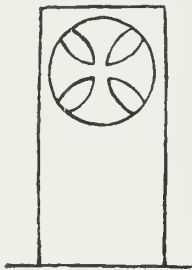
Dunblane.

Sauchope.

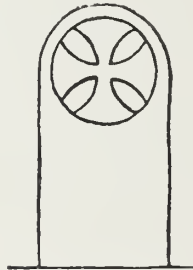
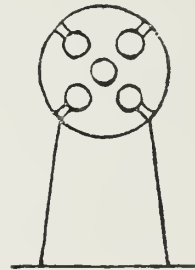
Ardchattan.

Rothessay.

On the upright cross-slabs the cross is placed within the margin of the slab, and its shape is defined either by its being made to stand out in higher relief than the rest of the surface forming the background, or by a difference in the patterns with which the cross and the background are ornamented. There are other kinds of monuments where the outline of the stone corresponds partially, or entirely, with that of the cross. The simplest of these is the "wheel-cross," a term intended to convey the idea of a cross with a round head like a wheel, having a shaft the width of which is less than the diameter of the head. The wheel-cross seems to have been developed from a rectangular slab bearing a cross within a circle at the top, first by rounding off the upper corners, and then by cutting away the sides of the slab below the cross so as to form a shaft. The three stages of the evolution of the wheel-cross are well illustrated by the stones at Bressay, Papil, and Whithorn.



No. 7.—Cross-slab.

No. 8.—Cross-slab with
Rounded Top.

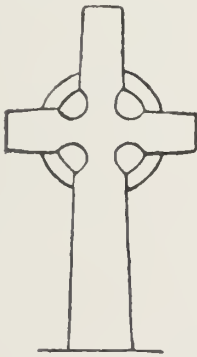
No. 9.—Wheel-cross.

The number of wheel-crosses in Scotland is comparatively small, and they are found exclusively in Wigtownshire. The wheel-cross is not indigenous to Scotland, but is the product of another geographical area, being of much more frequent occurrence in the Isle of Man, Wales, and Cornwall. The tallest wheel-cross in Scotland is the one at Monreith House, which is 7 feet 6 inches high, and has a head 1 foot 6 inches in diameter. The cross at Whithorn (No. 1) is not so tall, but has a larger head, 2 feet 2 inches in diameter.

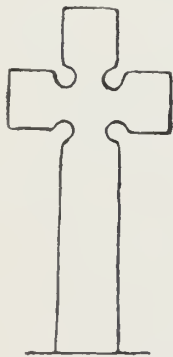
After the wheel-crosses in order of development come the erect free-standing crosses, in which the outline of the stone and of the cross correspond throughout, showing the complete shape of the cross standing out against the sky. An upright cross-slab would be converted into a

free-standing cross by removing those portions of the stone forming the background of the cross, but it is not possible to trace any successive steps by which this process was effected, except in one solitary instance, viz., at Gask, where the four holes between the arms of the cross and the surrounding ring are pierced right through the slab. It will be noticed that in the wheel-crosses the arms of the cross never project beyond the surrounding ring,¹ and that the decoration of the head is always treated separately from that of the shaft; exactly the reverse being true of the free-standing crosses.

There are three distinct types of free-standing crosses in Scotland—(1) having semicircular hollows in the angles between the arms and a connecting ring; (2) having semicircular hollows in the angles between the arms, but without the connecting ring; and (3) having large rounded hollows between the arms, which have expanded ends and no ring connecting them.



No. 10.—The Irish Type of Cross.



No. 11.—The Keills Type of Cross.



No. 12.—The Northumbrian Type of Cross.

The first type is certainly derived from Ireland, and the best representative specimens to be found in Scotland are at Iona and at Kildalton. The second type occurs at Keills; and the third type is probably of Northumbrian origin, the Scotch examples at Glencairn and elsewhere being within the ancient limits of that kingdom.

The highest free-standing cross in Scotland is at Iona (14 feet 3 inches), and next in order come those at Thornhill (9 feet 2 inches), Kildalton

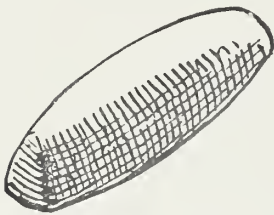
¹ This remark refers to the wheel-crosses of Scotland only, for at Penmon in Anglesey, St John's, Chester, and some places in Cornwall there are wheel-crosses with projections beyond the circle of the head.

(8 feet 6 inches), Dupplin (8 feet 6 inches), Barrochan (8 feet 3 inches), Keills (7 feet 4 inches), Canna (7 feet), and Camuston (6 feet 6 inches). The Kildalton cross has the greatest width across the arms.

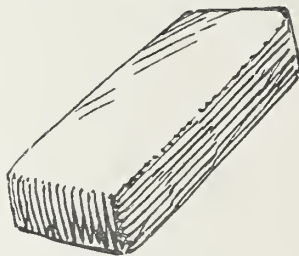
Two original cross-bases remain at Iona, each in the form of a stepped truncated pyramid of four sides, like those in Ireland. The cross-base at Barrochan appears to be ancient, and consists of a rudely-shaped rectangular block.

The segments of the rings of two of the crosses at Iona are composed of separate stones fitted into the arms with mortices and tenons.

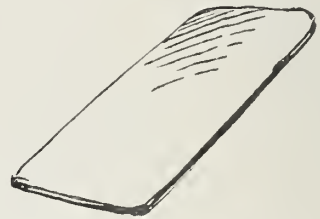
The recumbent monuments in Scotland are few in number, but there are enough to enable three typical forms to be distinguished, viz.—(1) the hog-backed; (2) the rectangular; and (3) the cross-slab.



No. 13.—The Hog-backed Recumbent Monument.



No. 14.—The Rectangular Recumbent Monument.



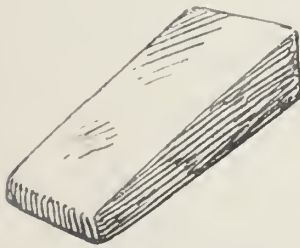
No. 15.—The Recumbent Slab.

The hog-backed monuments are shaped like a boat with a curved keel turned upside down. The cross-section resembles a pointed Gothic arch; looking at the side elevation, the central ridge, or keel, appears higher in the middle than at the ends, and has an uniformly rounded curve like a hog's back, whence the name. The sides are usually ornamented with scales, in imitation of the tiles on the roof of a house, and each of the ends terminates in a beast. The largest hog-backed monument in Scotland, which is at Govan (No. 10), is 7 feet 8 inches long, but the average size measures 6 feet 6 inches long by 2 feet high by 1 foot 9 inches wide. The stones at Meigle (No. 25) and at Brechin (No. 2) are shaped somewhat differently from the rest, the former being like an ordinary hog-backed monument cut in half, and the latter having its cross-section like an elliptical arch instead of a pointed one.

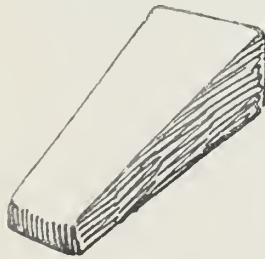
The hog-backed type of monument does not appear to be of Scotch

origin, as it occurs much more frequently in the north of England.¹ The Scotch examples have been fully described and illustrated by the late Mr Russell Walker in the *Proc. Soc. Ant. Scot.* (vol. xix. p. 406).

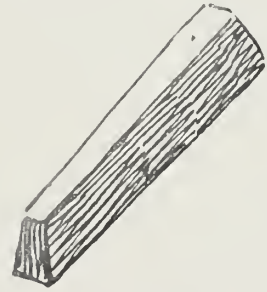
No two of the rectangular recumbent monuments are exactly the same shape, although they all have five flat faces, besides the one which lies on the ground. The stones at Inchinnan (No. 3) and at Govan (Nos. 7, 13, 23, and 31) approximate most nearly to the true rectangular shape. Two of the stones at Meigle (Nos. 12 and 26) preserve the same width throughout the whole length of the slab, but the height is less at the foot than the head. In the case of those at St Vigean's (No. 14) and Meigle (No. 9) both the width and the height are less at the foot than the head, and one of the stones at Meigle (No. 11) has the sides, ends, and top all sloping.



No. 16.—Recumbent Monument Higher at the Head than at the Foot.



No. 17.—Recumbent Monument Higher and Wider at the Head than at the Foot.



No. 18.—Recumbent Monument with all the Faces Sloping.

Many of these monuments have a socket at the head for the insertion of a small upright cross. The stones are evidently intended to be laid horizontally over the grave of the deceased. The average size is about 5 feet 9 inches long by 2 feet wide by 1 foot thick. Most of the forms are peculiar to Scotland.

The recumbent cross-slabs are found almost exclusively at Govan and Inchinnan. Like the rectangular body-stones just described, they were intended to cover the grave of the deceased, but they differ from the former in having the upper face almost flush with the surface of the ground, instead of projecting above it, and in not having the sides or ends sculptured. The shapes of the cross-slabs vary a little and deviate from

¹ At Sockburn and Lower Dinsdale in Durham; Brompton in Yorkshire; Heysham in Lancashire; Cross Canonby and Plumblaud in Cumberland; Repton in Derbyshire; Lanivet and St Tudy in Cornwall, &c.

the true rectangular form, some being wider at the top than at the bottom, others wider in the middle than at the ends, and a few having curved sides or rounded ends.



No. 19.—Rectangular
Slab.



No. 20.—Slab Wider at the
Head than at the Foot.



No. 21.—Coffin-
shaped Slab.



No. 22.—Oval Slab.

No generalisations can be deduced from the altar tombs, sarcophagus, or architectural details, because there is hardly more than one specimen of each.

V.—THE GENERAL ARRANGEMENT OF THE DESIGNS SCULPTURED ON THE MONUMENTS.

In the case of the rude pillar-stones the symbols are scattered over the surface, without any attempt being made to arrange them symmetrically, so as to form a complete decorative design. Next in order of development after the pillar-stones comes a transitional class between them and the upright cross-slabs, in which the outline of the stone forms the margin of the design.

There are only a few examples belonging to this transitional class, viz., at Ulbster, Mortlach, Migvie, Monymusk, Aboyne and Alyth. Here the cross is placed in the centre of one, or both, of the broad faces of the stone, and the symbols or other component parts of the design arranged more or less symmetrically round it.

The upright cross-slabs exhibit a greater amount of architectural feeling than the foregoing, as the four vertical and two horizontal angles have mouldings which define the margin of the stone exactly and form a kind of frame round each of the five faces. The practice of enclosing decorative designs within a well-defined margin is an essential characteristic of all Celtic works of art, whether they be the illuminated pages of MSS., objects of metal, or sculptured stones.

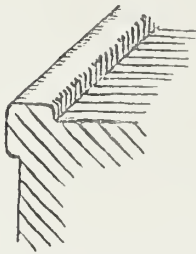
The importance given to the margin, or border, varies greatly in different schools of decorative art,¹ the two opposite extremes being the Japanese school where the border is practically ignored altogether, and the Celtic school where it is made one of the main features, controlling everything within it. In the Celtic MSS. the margins usually consist of series of parallel lines of different thicknesses and colours, together with rows of red or black dots; but they are often much more than this, and form a regular panelled frame of considerable width round the whole page.

The treatment of the back of the stone at Nigg approaches most nearly to that of the illuminated pages of the MSS. of the same period, as it has

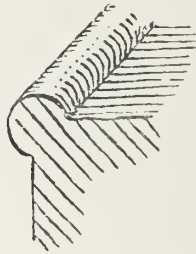
¹ See chapter on "The Use of the Border" in Lewis F. Day's *Planning of Ornament*.

a panelled frame enclosing the whole face. There are other instances of upright cross-slabs with wide borders, not panelled as at Nigg, but forming a continuous ornamental band round the edges, at the following places, viz., Hilton of Cadboll, Tarbet No. 1, Rosemarkie No. 1, Cossins, Woodwray, Dunfallandy, and Meikle No. 5.

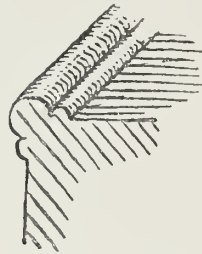
On the upright cross-slabs the margin consists either of a flat band slightly rounded at the edges, or a roll, double-bead, or cable moulding.



No. 23.—Flat-band Moulding.



No. 24.—Roll Moulding.



No. 25.—Double-bead Moulding.



No. 26.—Cable Moulding.

Now comes the question of filling in the space surrounded by the border. The upright cross-slabs present five rectangular faces to be decorated, viz., the front,¹ back, two sides, and top, each of which is treated in a different manner. The design of the front can be modified in various ways by altering the position and size of the cross thus—



No. 27.—Where the Top and two Side Arms and the Shaft all extend to the Margin.



No. 28.—Where the Top and two Side Arms only extend to the Margin.



No. 29.—Where the two Side Arms and the Shaft only extend to the Margin.



No. 30.—Where the two Side Arms only extend to the Margin.

¹ The front is the face with the cross on it.

The face of the slab is now divided into two parts, viz., the cross and the background. The forms of the crosses will be dealt with sub-



No. 31.—Where the Top Arm and Shaft only extend to the Margin



No. 32.—Where the Top Arm only extends to the Margin.



No. 33.—Where the Shaft only extends to the Margin.



No. 34.—Where none of the Arms nor the Shaft extend to the Margin.

sequently. At present we are concerned only with the way in which the surfaces of the cross and background are broken up into panels, and the distribution of the decorative sculpture.

First, with regard to the cross, the simplest treatment is not to subdivide its surface at all, but to fill the whole with the same kind of ornament, whether interlaced-work, key-patterns, or spirals,¹ thus—



No. 35.—Interlaced-work, as at—

Ulbster.
Brodie.
Migvie.
Aboyne.
Aldbar.
Farnell.
Invergowrie, Nos. 1 and 2.
Kirriemuir, No. 3.
St Vigean's, No. 10.



No. 36.—Key-patterns, as at—

Kingoldrum, No. 1.
Monifieth, No. 1.



No. 37.—Spirals, as at—

Shandwick.
Mortlach.

¹ In the figs. Nos. 35 to 50 interlaced-work is denoted by vertical lines of shading, key-patterns by horizontal lines, spirals by diagonal lines, and zöomorphie designs by cross hatching.

Next, the cross may be divided into five panels by placing a square, or circular, panel in the centre of the head. All the panels may be filled in



No. 38.—Five Panels all filled with Interlaced-work, as at—

Glamis, No. 2.
Meikle, No. 19.
Rossie.



No. 39.—Central Panel filled with Spirals, and the rest with Interlaced-work, as at—

Skinnet.
Dyce.
Meikle, No. 1.



No. 40.—Central Panel filled with Spirals, and the rest with Key-patterns, as at—

Kingoldrum, No. 2.



No. 41.—Central Panel filled with Spirals, the Lower Panel with Interlaced-work, and the rest with Key-patterns, as at—

Farr.



No. 42.—Central Panel filled with Spirals, the Top and Bottom Panels with Interlaced-work, and the rest with Key-patterns, as at—

Aberlemno.



No. 43.—Central Panel filled with Key-pattern, and the rest with Spirals, as at—

Inchbrayock, No. 1.



No. 44.—Central and two Side Panels filled with Interlaced-work, and the rest with Spirals, as at—

Monifieth, No. 2.

with the same kind of ornament, but with variations in the patterns; or the different kinds of ornament may be contrasted as above.

Lastly, the shaft may be divided into two or more panels and filled in with different kinds of ornament thus—



No. 45.—Head of Cross filled with Key-pattern and Bottom Panel of Shaft with Zoömor- phic Design, as at—

Kirriemuir, No. 2.



No. 46.—Central Panel of Head filled with Key-pattern, and the rest with Interlaced-work, as at—

Eassie.



No. 47.—Central and Upper and Lower Panels of Head filled with Interlaced-work, two Side Panels with Key-pat- terns, and Bottom Panel of Shaft with Spirals, as at—

St Vigean's, No. 7.



No. 48.—Central Panel of Head and Bottom Panel of Shaft filled with Interlaced-work, Panels on four Arms of Cross with Zoömor- phic Designs, and remaining Panel on Shaft with Key-pattern, as at—

Nigg.



No. 49.—Central Panel of Head and two Lower Panels of Shaft filled with Interlaced-work, Panels on two Side Arms of cross with Key-patterns, and on Upper and Lower Arms with Spirals, as at—

Dunfallandy.



No. 50.—Central Panel of Head filled in with Spirals, Panels on Upper and Lower Arms of Cross with Key-patterns, and the rest with Interlaced-work, as at—

St Madoes, No. 1.

The panels are not always separated from one another by a raised band, or moulding, but the effect of a different panel is produced by a change in the pattern.

The designs on the cross are always essentially decorative, and not either symbolical or pictorial, the latter being kept for the background. The ornament used on the cross is confined almost exclusively to interlaced-work, key-patterns, and spirals; zoöomorphic and foliageous ornament are of very rare occurrence.



No. 51. — Background of Cross forming four whole Panels, as at —

Brodie.
Kirriemuir, No. 1.
" "
" "
St Madoes.
Crieff.
Inchbrayock, No. 1.
St Vigean's, No. 1.
Meigle, No. 1.
" "
Aberlemno, No. 1.
Glamis, Nos. 1 and 2.
Kingoldrum.
Woodwray.
Gask.
Benvie.
Seconie.
Rossie.



No. 52. — Background on each side of Shaft of Cross divided into two Panels, as at —

Nigg.
Farnell.
Eassie.



No. 53. — Background on each side of Shaft of Cross divided into three Panels, as at —

Aberlemno, No. 2.
Cossins.



No. 54. — Background on each side of Shaft of Cross divided into four Panels, as at —

Golspie.
Dunfallandy.
Kettins.

A very exceptional way of treating the cross occurs at Rossie, Fordoun, and Balluderon. Here the upper part of the cross is decorated as usual, but the shaft is formed in outline and placed over a hunting-scene, giving the appearance of a transparent cross in front of the representation beyond.

The arrangement of the design of the background depends to a great extent on the size and position of the cross, as shown on the previous diagrams Nos. 27-34.

If the top and two side arms and the shaft of the cross all extend to the margin of the slab, the background is thus divided into four separate panels. The two long panels on each side of the shaft are sometimes again subdivided into smaller ones by horizontal bands or mouldings.

The designs sculptured on the background of the cross do not differ materially from those usually found on the backs of the slabs, and consist almost universally of figures of monsters, beasts, men, and occasionally symbols, but very rarely geometrical ornament, although in exceptional instances occur at Golspie, Inchbrayock (No. 1), and Invergowrie (No. 1).

If the top and two side arms, but not the shaft, of the cross extend to the margin of the slab, then the rectangular spaces at each side of the shaft and below it may be allowed to form one panel, or additional panels may be introduced at the bottom of the slab thus--



No. 56.—Background of Cross not subdivided into Panels, as at—

Aboyne
Dyce.
Migvie.
Fordoun.
Balluderon.
Crail.
Sanchope.

PART II.



No. 57.—Lower Part of Background of Cross divided into three Panels, as at—

Elgin.
Forres.



No. 58.—Lower Part of Background of Cross divided into two Panels, as at—

Shandwick.

F

Or a panel of less width than the slab may be placed at the bottom, either entirely isolated, or forming a sort of base for the cross, thus—



No. 59.—Lower Part of Background of Cross divided into two Panels, as at—

Glenferness.



No. 60.—Lower Part of Background of Cross divided into three Panels, as at—

St Vigean's, No. 7.

Aldbar.

Skinnet.

Rothesay.



No. 61.—Lower Part of Background of Cross divided into three Panels, as at—

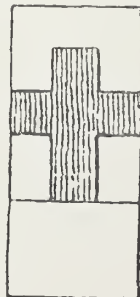
Meigle, No. 5.

If the two side arms, but not the top arm, of the cross extend to the margin of the slab, then the spaces above and below the cross may be allowed to form complete panels, or they may be subdivided thus—



No. 62.—Background forming two Panels, as at—

Monymusk.



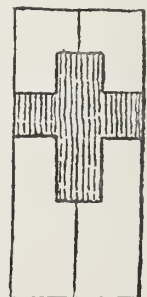
No. 63.—Lower Part of Background divided into three Panels, as at—

The Maiden Stone.



No. 64.—Upper and Lower Part of Background, each divided into three Panels, as at—

Farr.



No. 65.—Upper and Lower Part of Background, each divided into two Panels, as at—

Woodway.

If neither the top and two side arms, nor the shaft, of the cross extend as far as the margin, then the whole of the background may be allowed to form one panel, or it may be subdivided thus—



No. 66.—The Whole of the Background forming one Panel, as at—

Ulster.
Mortlach.



No. 67.—The Background divided into three Panels with the Cross in the Middle of the Top One, as at—

Rosemarkie, No. 1 (front).



No. 68.—The background divided into three Panels with the Cross in the Middle of the Centre One, as at —

Rosemarkie, No. 1 (back).

The two narrow faces or side-edges of the upright cross-slab are as often as not left quite plain, but sometimes they each form a single panel of ornament, and in the case of some of the more important monuments (as at Rosemarkie) there are several smaller panels.

The narrow upper face or top of the upright cross-slab being generally out of sight is very seldom sculptured, and is not sufficiently large to be worth subdividing into smaller panels. The tops of the stones at Kirriemuir (No. 2) and Whithorn (No. 4) are, however, ornamented, and the St Madoes stone has two beasts facing each other at the apex.

The slabs at Kirriemuir and Whithorn, just referred to, are of very insignificant height, so that the top would be well below the level of the eye, and therefore easily visible. There are, however, many other slabs equally low which are quite devoid of ornament. The curious conventional trees on each side of the pediment surmounting the Nigg stone extend partly over the two upper sloping surfaces of the slab.

The arrangement of the design of the back of the upright cross-slab is a comparatively simple matter. In the great majority of cases the whole of the reverse face of the slab forms one panel, but it is occasionally subdivided into two or more smaller panels thus—



No. 69.—Back of Rectangular Slab forming one whole Panel as at—



No. 70.—Back of Slab divided into two Panels by a Horizontal Straight Line, as at—



No. 71.—Back of Slab divided into two Panels by a Stepped Line, as at—



No. 72.—Back of Slab divided into three Panels by a Horizontal and Vertical Line, as at—

Golspie.
Nigg.
Tarbet.
Brodie.
Mortlach
Elgin.
Migvie.
Aldbar.
Farnell.
Glanis.
Inchbrayock, No. 1.
Kingoldrum, No. 1.
Menmuir.
St Vigean's, Nos. 1,
10, and 11.
Kirriemuir, Nos. 2
and 3.
Fowlis Wester.
Meigle, Nos. 3 to 8,
23 and 27.
Crail.
Largo.
Scoonie.

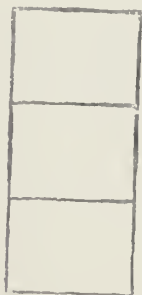
Glenferness.
Aberlemno, Nos. 1
and 2.
Benvie.
Invergowrie, Nos. 1
and 2.
Kirriemuir, No. 1.
Dunfallandy.

Eassie.
Woodwray.

Monifieth, No. 3.

With two horizontal divisions we get three panels; with three

horizontal divisions four panels; and if more panels are required vertical divisions are added thus—



No. 73.—Back of Slab divided into three Panels by two Horizontal Lines, as at—

Hilton of Cadboll.



No. 74.—Back of Slab divided into four Panels by three Horizontal Lines, as at—

Forres.
Maiden Stone.
Cossins.
Inverkeithing.
Mugdrum.



No. 75.—Back of Slab divided into seven Panels by four Horizontal Lines and one Vertical line, as at—

Shandwick.



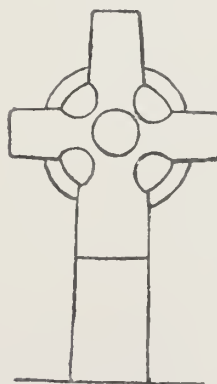
No. 76.—Back of Slab divided into seven Panels, as at—

St Madoes.

The arrangement of the sculptured designs on the free-standing crosses will be most easily understood by giving two typical examples, viz., those at Dupplin and at Kildalton.



No. 77.—Head of Cross divided into five Panels by Central Boss and Shaft into three Panels.



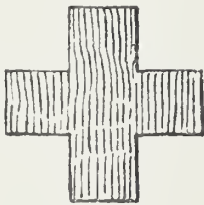
No. 78. Head of Cross divided into five Panels by Central Boss and Shaft forming one Panel.

The system of panelling is the same as that already described for the crosses on the slabs.

VI.—THE FORMS OF THE CROSSES ON THE MONUMENTS.

The crosses are here classified entirely according to their geometrical shapes, and quite independently of their relative age or possible origin.

The simplest kind of cross is formed by the intersection at right angles of two rectangular bars, or bands, of equal width. If the two bars are the same length, and their middle points correspond with the point of intersection, we get the plain equal-armed cross, used by the Greek Church. If the lower arm of this cross be lengthened, so as to form a shaft, we get the plain cross with unequal arms, used by the Latin Church—



No. 79.—Greek Cross.



No. 80.—Latin Cross.

The proportions of the lengths of the top and two side arms vary a little in different examples, but the two side arms are always of equal length and the top arm sometimes a little longer. All the other forms of crosses found on the Scotch monuments may be derived from these—(1) by altering the shape of the ends of the arms; (2) by altering the shape of the hollow angles where the arms intersect; and (3) by combining the cross with a circular ring. Of each new variety of cross obtained in this way there are two kinds—(1) an equal-armed one, founded on the Greek Cross, and (2) one with a shaft, founded on the Latin cross.

The shape of the ends of the arms is most commonly altered by making

the width greater or less at the extremity than next the intersection with the shaft, or by making the sides of the arm slightly curved thus—



No. 81.—Square End.



No. 82.—Expanded End.



No. 83.—Tapering End.



No. 84.—Curved and Expanded End.

The shape of the hollow angles where the arms intersect is altered by taking round or square pieces out of each pair of intersecting arms thus—



No. 85.—Square Angle.



No. 86.—Square Hollow Angle.



No. 87.—Double Square Hollow Angle.



No. 88.—Stepped Hollow Angle.



No. 89.—Round Hollow Angle.



No. 90.—Singly-Cusped Hollow Angle.



No. 91.—Trefoil or Doubly-Cusped Hollow Angle.



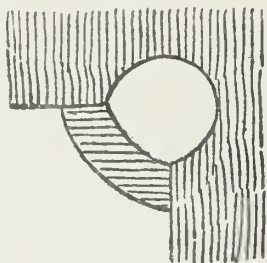
No. 92.—Round Hollow Angle, with Projecting Square Corner.



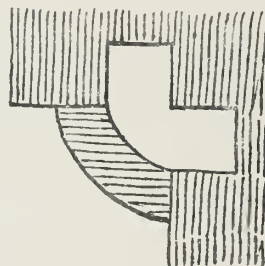
No. 93.—Parabolic Hollow Angle.

The proportion of the diameter of the circular ring in relation to the breadth across the arms varies, but it is usually so arranged that the inner

circle of the ring cuts the arms at the points where the hollow between them commences thus—



No. 94.—Round Hollow Angle and Circular Ring.

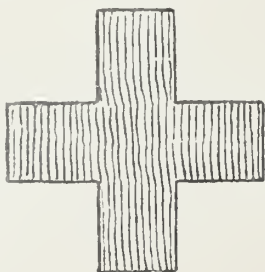


No. 95.—Double-Square Hollow Angle and Circular Ring.

The ring does not cross over the arms, but is broken up into four quadrants.

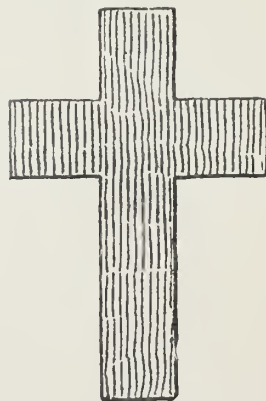
In one kind of cross the whole of the cross is enclosed within a ring, and then the breadth of the ring is reduced to a single roll moulding surrounding the whole.

The following table shows the different varieties of crosses and the localities where they occur :—



No. 96.—Cross with Plain Square Angles
(Arms of Equal Length).

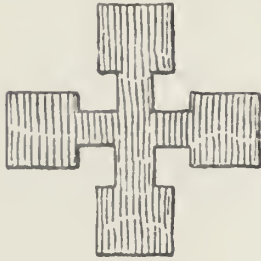
Brechin, No. 1.



No. 96A.—Cross with Plain Square Angles
(with Shaft).

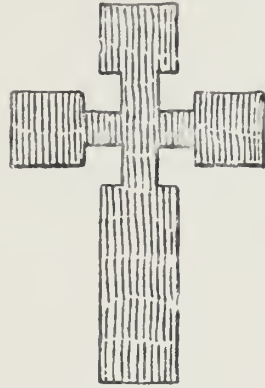
Alyth.
Forteviot, No. 2.
Abercromby, No. 1.
Soroby.
Roseneath.
Hamilton.
Govan, Nos. 4 and 5.

Varieties of crosses and the localities where they occur (*continued*)—



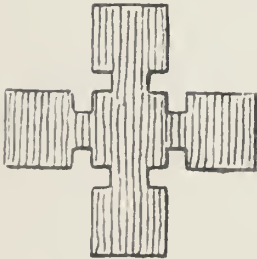
No. 97.—Cross with Square Hollow Angles
(Arms of Equal Length).

Kilmartin.



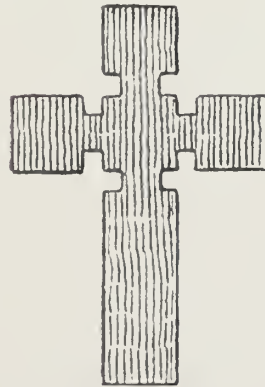
No. 97A.—Cross with Square Hollow Angles
(with Shaft).

No examples.



No. 98.—Cross with Double-Square Hollow Angles
(Arms of Equal Length).

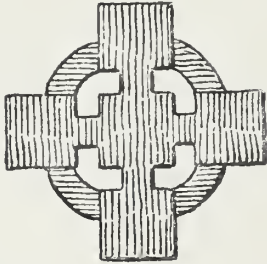
St Andrews, No. 1.



No. 98A.—Cross with Double-Square Hollow
(with Shaft).

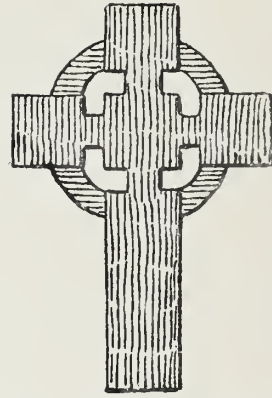
Skinnet.
Edderton.
Nigg.
Altyre.
Inchbrayock, No. 2.
Kingoldrum, No. 1.
Kirriemuir, Nos. 1 and 3.
St Andrews, Nos. 3, 8, and 15.
St Vigean's, No. 23.
Fowlis Wester.
Meikle, Nos. 6 and 7.
Abercromby, No. 3.

Varieties of crosses and the localities where they occur (*continued*)—



No. 99.—Cross with Double-Square Hollow Angles,
Connecting Ring (Arms of Equal Length).

Clyne.
Farnell.



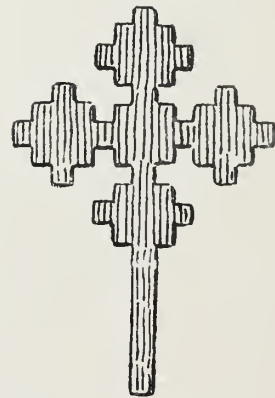
No. 99A.—Cross with Double-Square Hollow Angles
Connecting Ring (with Shaft).

Lothbeg.
Farnell.
Inchbrayock, No. 1.
Aldbar.
Invergowrie, Nos. 1 and 2.
St Vigean's, Nos. 11 and 17.
Meikle, No. 2.
Largo.



No. 100.—Cross with Stepped Hollow Angles
(Arms of Equal Length).

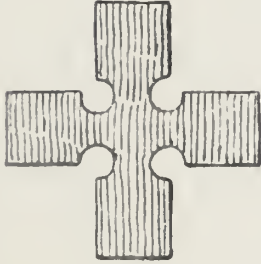
Rosemarkie, No. 1.



No. 100A.—Cross with Stepped Hollow Angles
(with Shaft).

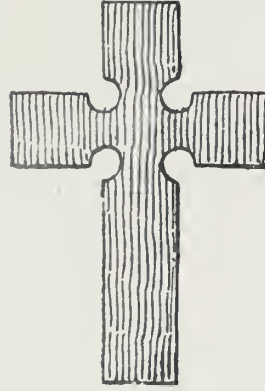
No examples.

Varieties of crosses and the localities where they occur (*continued*)—



No. 101.—Cross with Round Hollow Angles
(Arms of Equal Length).

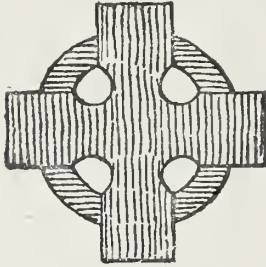
Flotta.
Rosemarkie.
Woodwray.



No. 101A.—Cross with Round Hollow Angles
(with Shaft).

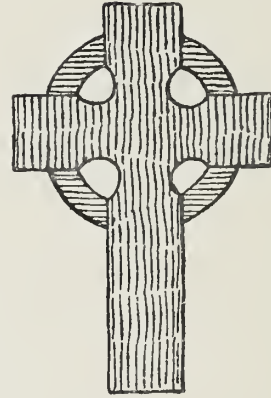
Lothbeg.	Strathmartin.
Golspie.	Benvie.
Shandwick.	Kingoldrum.
Kilbar.	Camuston.
Wester Delnies.	Menmuir.
Brodie.	Logierait.
Drainie, Nos. 11 and 14.	Seconie.
Meigle, Nos. 3, 4, 17, and 18.	St Andrews, Nos. 3, 6, 8, and 18.
Rossie.	Crail.
Dupplin.	Arthurlee.
Mortlach.	Keills.
Monymusk.	Kilmartin.
Glamis, No. 1.	Inchinnan, Nos. 1 and 3.
Kirriemuir, Nos. 1 and 5.	Govan, Nos. 6, 9, 13, 14, 15, 18, 19, 20, 23, 26, 27, 28, 32, 33, and 34.
St Vigean's, Nos. 2, 7, 10, 12, 19, and 24.	

Varieties of crosses and the localities where they occur (*continued*)—



No. 102.—Cross with Round Hollow Angles and Connecting Ring (Arms of Equal Length).

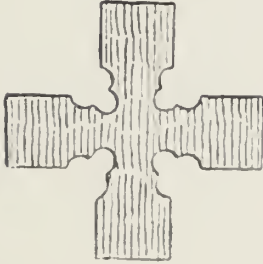
Fordoun.



No. 102A.—Cross with Round Hollow Angles and Connecting Ring (with Shaft).

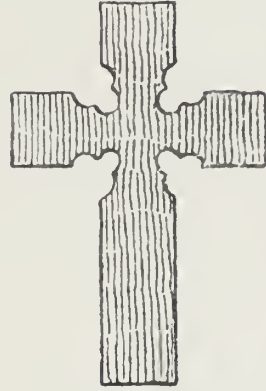
Farr.	Rossie.
Reay.	Crieff.
Edderton.	Dunblane.
Tarbet, No. 4.	Forteviot, No. 3.
Canna.	St Madoes, Nos. 1
Glenferness.	and 2.
Elgin.	St Andrews, Nos. 2,
Drainie, No. 4.	7, and 10.
Forres.	Tullibole.
Aboyne, No. 1.	Barrochan.
Maiden Stone.	Iona, Nos. 1, 7, 8,
Aberlemuo, Nos. 2	and 9.
and 3.	Kildalton.
St Vigean's, Nos. 7,	Ardchattan.
13, 15, and 21.	Eilean Mòr.
Gask.	Kilfinan.
Meikle, Nos. 1, 5, 19,	Lesmahagow.
21, 23, and 24.	

Varieties of crosses and the localities where they occur (*continued*) -



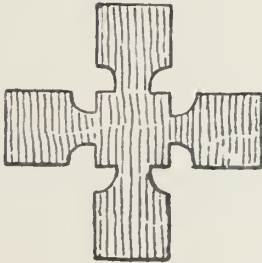
No. 103.—Cross with Trefoil Hollow Angles
(Arms of Equal Length).

No examples.



No. 103A.—Cross with Trefoil Hollow Angles
(with Shaft).

Glamis, No. 2.
Abercromby, No. 2.



No. 104.—Cross with Round Hollow Angles and
Projecting Square Corner (Arms of Equal Length).

No examples.



No. 104A.—Cross with Round Hollow Angles and
Projecting Square Corner (with Shaft).

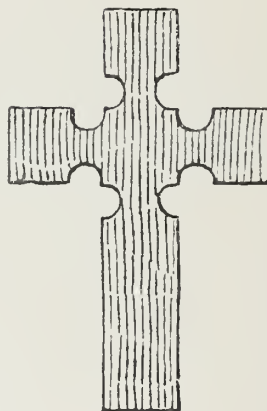
Cossins.
Monifieth, Nos. 1 and 2.
Dunfallandy,
St Madoes, No. 1.
Sauchope (?).

Varieties of crosses and the localities where they occur (*continued*)—



No. 105.—Cross with Cusped Hollow Angles
(Arms of Equal Length).

No examples.



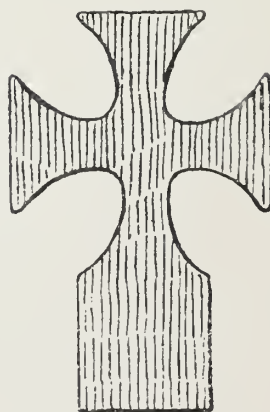
No. 105A.—Cross with Cusped Hollow Angles
(with Shaft).

Ulbster.



No. 106.—Cross with Parabolic Hollow Angles
(Arms of Equal Length).

No examples.



No. 106A.—Cross with Parabolic Hollow Angles
(with Shaft).

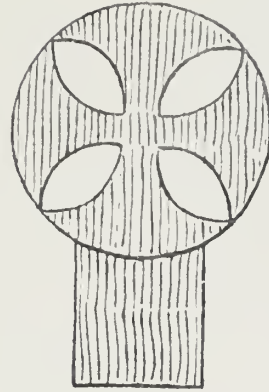
Mansfield.
Mimigaff.
Gleucain.
Thornhill.

Varieties of crosses and the localities where they occur (*continued*).



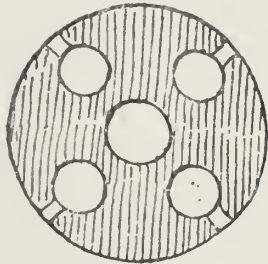
No. 107.—Circular Cross with Expanded Ends to the Arms (Arms of Equal Length).

Bressay.



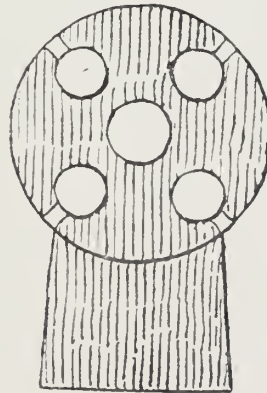
No. 107A.—Circular Cross with Expanded Ends to the Arms (with Shaft).

Papil.
Soroby.



No. 108.—Circular Cross with Five Bosses (Arms of Equal Length).

No examples.



No. 108A.—Circular Cross with Five Bosses (with Shaft).

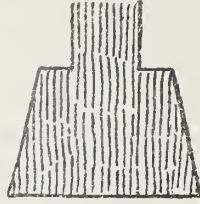
Kirkinner, Nos. 1 and 2.
St Ninian's Cave.
Whithorn, Nos. 1, 3, 4, 9, and 10.
Monreith, No. 1.

Various forms of terminations of bottoms of shafts of crosses—



No. 109.—Square Base.

Forres.
Elgin.
Ulster.
Largo.
St Vigean's, No. 7.
Aldbar.
Rothesay.
Skinnet.



No. 110.—Truncated Base.

Cossins.



No. 111.—Semicircular Base.

Farr.
Edderton.
Monymusk.
St Vigean's, No. 12.



No. 112.—Human Base.

Crail.

Various ways of marking the distinction between the head and shaft of the cross—



No. 113.—Shaft Narrowed.

Monymusk.
Woodwray.
Ulster.
Skinnet.



No. 114.—Shaft Widened.

Fowlis Wester.
Kirkcolm.



No. 115.—Rectangular Notch.

Largo.
Rossie.



No. 116.—Round and Square Notch.

Dunfallandy.
Glamis.
Eassie.

VII.—THE SYMBOLS OCCURRING ON THE MONUMENTS.

The designs sculptured on the monuments belonging to Class I. are confined almost exclusively to certain symbols, the meaning of which is at present unknown. These symbols also occur on the monuments belonging to Class II., but instead of being used alone, as in the former case, they are associated with crosses, figure subjects, and ornament, the nature of which will be subsequently described. There are about 46 different symbols altogether, consisting of (1) certain geometrical forms, which may either be purely conventional, or be intended to represent natural objects; (2) figures of inanimate objects of known use; and (3) figures of birds, beasts, fish, reptiles, imaginary creatures, and plants. Five of the geometrical forms and one of the reptiles are frequently, though not always, used in combination with a floriated rod bent either once or twice, so as to resemble the letter **V** or **Z**, or more usually **Σ**.

I. CLASSIFIED LIST OF THE SYMBOLS.

The following is a classified list of the symbols, giving also the reference numbers to the figure of each inserted in the succeeding table of their localities :—

CONVENTIONAL GEOMETRICAL FORMS.

- | | |
|--|---|
| (1) Circular disc, No. 117. | (11) Bow and arrow, No. 127. |
| (2) Pair of circular discs (unconnected), No. 118. | (12) Arch, or horseshoe, No. 128. |
| (3) Pair of circular discs with connecting cross-bar (or so-called spectacle ornament), No. 119. | (13) Arch and V-shaped rod, No. 129. |
| (4) Triple disc and cross bar, No. 120. | (14) S-shaped figure, No. 130. |
| (5) Double disc and Z-shaped rod, No. 121. | (15) Triple oval, No. 131. |
| (6) Circular disc and rectangle (or so-called mirror case), No. 122. | (16) Triquetra, No. 132. |
| (7) Ditto, with a square notch or indentation at the bottom, No. 123. | (17) Rectangular figure, No. 133. |
| (8) Crescent and V-shaped rod, No. 124. | (18) L-shaped rectangular figure, No. 134. |
| (9) Crescent, No. 125. | (19) Stepped rectangular figure, No. 135. |
| (10) Double crescent, No. 126. | (20) Ditto, with curved ends, No. 136. |
| | (21) Notched rectangle with curved end (or so-called tuning-fork), No. 137. |
| | (22) Notched rectangle, No. 138. |
| | (23) Notched rectangle and Z-shaped rod, No. 139. |

OBJECTS OF KNOWN USE.

- | | |
|--------------------------------|------------------------|
| (24) Mirror and comb, No. 140. | (27) Pincers, No. 143. |
| (25) Hammer, No. 141. | (28) Shears, No. 144. |
| (26) Anvil, No. 142. | (29) Crozier, No. 145. |

BEASTS, BIRDS, FISH, REPTILES, AND PLANTS.

- | | |
|---|---|
| (30) Centaur, No. 146. | (38) Wolf, No. 154. |
| (31) Beast with long jaws, crest and scroll feet (so-called elephant), No. 147. | (39) Beast's head, No. 155. |
| (32) Bull, No. 148. | (40) Bird (Eagle), No. 156. |
| (33) Bull's head and serpent, No. 149. | (41) Fish, No. 157. |
| (34) Boar, No. 150. | (42) Sea horse, No. 158. |
| (35) Lion, No. 151. | (43) Hippocampus, No. 159. |
| (36) Horse, No. 152. | (44) Serpent, No. 160. |
| (37) Stag, No. 153. | (45) Serpent and Z-shaped rod, No. 161. |
| | (46) Flower, No. 162. |

II. LOCALITIES OF THE DIFFERENT SYMBOLS.

The following table shows the localities of the monuments of Class I. and Class II. on which the different symbols occur; the figures are examples selected as typical of the symbol-forms, but their details vary on different monuments:—



No. 117.—Circular Disc.

CLASS I.

Ross—
Dingwall (back).
Hebrides—
Benbecula.
Elgin—
Knockando, No. 1.
Banff—
Balneilean.
Aberdeen—
Kinellar.
Rothiebrisbane.

CLASS II.

Forfar—
Aberlemno, No. 2 (back).



No. 118.—Pair of Circular Discs (unconnected).

CLASS I.

Kincardine—
Stonehaven, No. 5.

CLASS II.

Ross—
Hilton of Cadboll.

LOCALITIES OF THE DIFFERENT SYMBOLS—*continued.*



No. 119.—Pair of Circular Discs (connected by a cross-bar).

CLASS I.

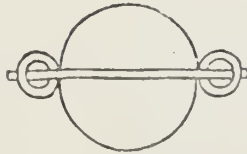
- Inverness*—
 Drumbuie, No. 1.
Aberdeen—
 Fyvie, No. 2.
 Logie Elphinstone, No. 1.
 Newton in the Garioch.

CLASS II.

- Caitness*—
 Ulbster (back).
Sutherland—
 Golspie.
Ross—
 Shandwick.
Forfar—
 Monifieth, No. 1.
 St Vigean's, No. 1.
 Woodwray.
Pecth—
 Dunfallandy.
 Fowlis Wester (?).
 Meigle, No. 3.
 „ No. 6.

CAVES.

Fife—East Wemyss (Sloping Cave, Jonathan's Cave, W. Dooct Cave, and Court Cave).



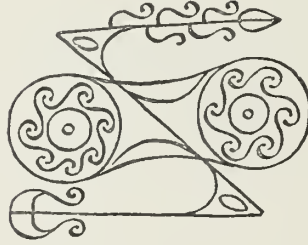
No. 120.—Triple Disc and Cross-Bar.

CLASS I.

- Caitness*—
 Keiss.
Sutherland—
 Kintradwell, No. 2.
Banff—
 Inveravon, No. 2.
Aberdeen—
 Clatt.
 Fetter Angus.
 Kintore, No. 1 (front).
Fife—
 Lindores.

CLASS II.

- Aberdeen*—
 Dyce, No. 2.
 Monymusk.
Forfar—
 Aberlemno, No. 2 (back).
 Glamis, No. 1 (front).
 „ No. 2 (front).

LOCALITIES OF THE DIFFERENT SYMBOLS—*continued.*

No. 121.—Double-Disc and Z-shaped Rod.

CLASS I.	CLASS II.
<i>Ross</i> —	<i>Ross</i> —
Dingwall.	Hilton of Cadboll.
Edderton, No. 1.	Rosemarkie, No. 1.
<i>Inverness</i> —	<i>Nairn</i> —
Congash, No. 2.	Glenferness.
Monaick (twice).	<i>Elgin</i> —
<i>Aberdeen</i> —	Brodie.
Bourtie.	Elgin.
Clatt, No. 1.	<i>Aberdeen</i> —
" No. 2.	Dyce, No. 2.
Dyce, No. 1.	Migvie.
Insch.	<i>Kincardine</i> —
Inverury, No. 1.	Fordoun.
" No. 3.	<i>Forfar</i> —
Keith Hall.	Aberlemno, No. 3.
Kintore, No. 2 (front).	Cossins.
Leys of Dummuies.	Eassie.
Logie Elphinstone, No. 2 (twice).	Kirriemuir, No. 2.
Rhyrie, No. 2.	Monifieth, No. 1.
" No. 5.	Strathmartine, No. 5.
Tullich.	St Vigean's, No. 1.
<i>Kincardine</i> —	" No. 3.
Stonchaven, No. 1.	" No. 5.
" No. 4.	" No. 6.
" No. 6 (?).	<i>Perth</i> —
<i>Forfar</i> —	Alyth.
Aberlemno, No. 1.	St Madoes.
Dunnichen.	Meigle, No. 7.
Keillor.	<i>Fife</i> —
<i>Perth</i> —	Largo.
Strowan.	
ROCK SURFACE.	CAVES.
<i>Kirkeulbright</i> —Anworth.	<i>Fife</i> —E. Wemyss (W. Doocot Cave).
METAL WORK.	
<i>Forfar</i> —Monifieth.	<i>Dunfries</i> —Drumlanrig.
<i>Fife</i> —Norrie's Law.	

LOCALITIES OF THE DIFFERENT SYMBOLS—*continued.*



No. 122.—Circular Disc and Rectangle.

- CLASS I.
Inverness—
 Drumbuie, No. 2.
 Knocknagael.
Banff—
 Arndilly.
 Inveravon, No. 1.
Aberdeen—
 Fetter Angus.
 Inverury, No. 1.
 „ No. 2.
 Tillytarmont.

- CLASS II.
Aberdeen—
 Dyce, No. 2.
 Meigle, No. 5.



CAVES.

Elgin—Covesea.



No. 123.—Circular Disc and Rectangle with Square Indentation.

- CLASS I.
Orkney—
 S. Ronaldsay (back).
Caithness—
 Sandside.
Sutherland—
 Kintradwell, No. 1.

- CLASS II.
 No examples.



BONE OBJECT.

Orkney—Broch of Burrian.

LOCALITIES OF THE DIFFERENT SYMBOLS—*continued.*

No. 124.—Crescent and V-shaped Rod.

CLASS I.

- Orkney*—
 Firth.
 S. Ronaldsay (front and back).
Caithness—
 Thurso.
Sutherland—
 Clynekirkton, Nos. 1 and 2.
 Clynemilton.
 Craigton, No. 1.
 Kinradwell, No. 3.
 Little Ferry Liuks, Nos. 2 and 4.
Ross—
 Dingwall (front twice, and back).
Inverness—
 Findlarig.
 Inverallan.
 Lynchurn.
Hebrides—
 Pabbay.
Elgin—
 Drainie, No. 1.
 Knockando, No. 1 (twice).
Banff—
 Inveravon, No. 2.
Aberdeen—
 Bourtie.
 Crichie.
 Daviot.
 Old Deer.
 Fyvie, No. 1.
 Inverury, No. 1.
 Kinellar.
 Kintore, No. 1 (back).
 Logie Elphinstone, Nos. 1, 2, and 2.
 Mill of Newton.
 Park.
 Rhynie, Nos. 4 and 6.
Forfar—
 Strathmartine, No. 1.
Perth—
 Abernethy, No. 1.
Edinburgh—
 Edinburgh.

CLASS II.

- Caithness*—
 Skinnet.
 Ulbster (back).
Sutherland—
 Golspie.
Ross—
 Hilton of Caddboll.
 Rosemarkie, No. 1 (twice).
 Tarbet, No. 1.
Nairn—
 Glenferness.
Elgin—
 Elgin.
Aberdeen—
 Dyce, No. 2.
Forfar—
 Aberlemno, No. 3.
 Cossins.
 Monifieth, No. 2.
Perth—
 Dunfallandy (twice)
 Fowlis Wester.
 St Madoes, No. 1.
 Meigle, No. 4.
 Rossie (back).

LOCALITIES OF THE DIFFERENT SYMBOLS—*continued.*

CAVES.
Elgin—Covessea.

METAL-WORK.
Forfar—Monifieth.

BONE OBJECT.
Orkney—Broch of Burtian.



No. 125.—Crescent

CLASS I.
Sutherland—
Little Ferry Links, No. 2.
Ross—
Rosskeen.
Aberdeen—
Daviot.

CLASS II.
Forfar—
Kingoldrum, No. 1.
St Vigean's, No. 1.
Perth—
Meigle, No. 6.



No. 126.—Double Crescent.

CLASS I.
Aberdeen—
Kintore, No. 3.

CLASS II.
Caitness—
Ulster (back).



No. 127.—Bow and Arrow.

CLASS I.
Inverness—
Congash, No. 2.

CLASS II.
No examples.

LOCALITIES OF THE DIFFERENT SYMBOLS—*continued.*

No. 128.—Arch, or Horseshoe.

CLASS I.
Shetland—
 Sandness.
Caitness—
 Thurso.
Sutherland—
 Clynemilton.
Ross—
 Strathpeffer.
Inverness—
 Congash, No. 1.
Aberdeen—
 Drimmies.
 Huntly.
 Inverury, No. 2.
 Percylieu.
 Rothie Brisbane.
Perth—
 Bruce-ton.

CLASS II.
Forfar—
 Eassie (?).

CAVES.

Fife—E. Wemyss (Glasswork Cave and Court Cave).



No. 129.—Arch and V-shaped Rod.

CLASS I.
 No examples.

CLASS II.
Aberdeen—
 Migvie.

LOCALITIES OF THE DIFFERENT SYMBOLS—*continued*.



No. 130.—S-shaped Figure.

CLASS I.
Sutherland—
 Kintradwell, No. 1.
 „ No. 2.
Aberdeen—
 Drimmies.

CAVES.
Fife—E. Wemyss (W. Doocot Cave).

CLASS II.
 No examples.

METAL-WORK.
Aberdeen—Parkhill.



No. 131.—Triple Oval.

CLASS I.
Caithness—
 Sandside
 Keiss.

CAVES.
Elgin—Covesea.

CLASS II.
Caithness—
 Skinnet.



No. 132.—Triquetra.

CLASS I.
 No examples.

CLASS II.
Perth—
 Meigle, No. 1 (back).

LOCALITIES OF THE DIFFERENT SYMBOLS—*continued.*

No. 133.—Rectangular Figure.

CLASS I.
Shetland—
 Sandness.
Orkney—
 Firth.
 S. Ronaldsay (front).
Sutherland—
 Clynekirkton, No. 1.
 „ No. 2.
 Little Ferry Links, No. 1.
Hebrides—
 Benbecula.
Elgin—
 Grantown.
Aberdeen—
 Old Deer.
 Newbiggin Leslie.

CLASS II.
Sutherland—
 Golspie.
Forfar—
 Kirriemuir, No. 1 (?).

Elgin—Covesea.

CAVES.

Fife—E. Wemyss (Sloping Cave and
 W. Doocot Cave).



No. 134.—L-shaped Rectangular Figure.

CLASS I.
 No examples.

CLASS II.
Forfar—
 Strathmartine, No. 3.
 Woodwray (?).

CAVES.

Elgin—Covesea.

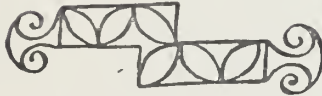
LOCALITIES OF THE DIFFERENT SYMBOLS—*continued.*



No. 135.—Stepped Rectangular Figure.

CLASS I.
Ross—
Rosskeen.

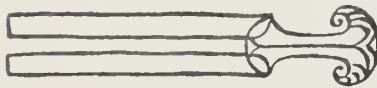
CLASS II.
Caitliness—
Ulvester (back).
Forfar—
Kingoldrum, No. 1



No. 136.—Stepped Rectangle with Curved Ends.

CLASS I.
No examples.

CLASS II.
Aberdeen—
Monymusk.



No. 137.—Notched Rectangle with Curved End.

CLASS I.
Sutherland—
Craigton, No. 1.
Dunrobin.
Kintradwell, No. 4.
Ross—
Rosskeen.
Banff—
N. Redhill (?).
Aberdeen—
Kintore, No. 3.
Perth—
Abernethy, No. 1.

CLASS II.
Ross—
Tarbet, No. 1.

LOCALITIES OF THE DIFFERENT SYMBOLS—*continued.*

[No. 138.—Notched Rectangle.]

[No examples on the sculptured stones or rocks.]

METAL-WORK.

Dumfries—Drumlanrig.

CAVES.

Fife—East Wemyss (Jonathan's Cave).

No. 139.—Notched Rectangle and Z-shaped Rod.

CLASS I.

Sutherland—
 Craigton, No. 2.
Inverness—
 Findlarig.
 Inverallan.
Elgin—
 Birnie.
Banff—
 Arndilly.
Aberdeen—
 Mill of Newton.
 Tyrie.

CLASS II.

Aberdeen—
 Maiden Stone.
Forfar—
 Aberlemno, No. 2 (back).

LOCALITIES OF THE DIFFERENT SYMBOLS—*continued*.

No. 140.—Mirror and Comb.

CLASS I.

- Shetland*—
 * Sandness.
Caithness—
 Sandside.
Sutherland—
 * Clynekirkton, No. 2.
 * Clynemilton.
 Craigton, No. 2.
 Dunrobin.
 Kintradwell, No. 3.
Inverness—
 Drumbuie, No. 2.
Elgin—
 Knockando, No. 2.
 Upper Manbean.
Baiff—
 Inveravon, No. 1.
 „ No. 2.
Aberdeen—
 Bourtie.
 * Clatt (?).
 Daviot.
 Drimmies.
 * Fyvie, No 1.
 * Inch.
 Keith Hall.
 * Kintore, No. 2 (back).
 Newbiggin Leslie.
 Park.
 * Rhynie, No. 4.
 „ No. 5.
 „ No. 6.
 * Tillytarment.
 * Tullich.
Forfar—
 Aberlemno, No. 1.
 Dunnichen.
 * Keillor (?).
Midlothian—
 Edinburgh (?).

CLASS II.

- Ross*—
 Hilton of Cadboll.
 Rosemarkie, No. 1 (two mirrors,
 but only one comb).
Aberdeen—
 * Formaston.
 Maiden Stone (back).
Forfar—
 * Glamis, No. 2 (back).
 Kingoldrum, No. 1.
 Kirriemuir, No. 1.
 Monifieth, No. 1.
 St Vigean's, No. 1.
 * „ No. 2 (?).
Perth—
 Meigle, No. 1 (back).
 Meigle, No. 7.

Note.—In the case of those marked with an asterisk the comb is missing.

LOCALITIES OF THE DIFFERENT SYMBOLS—*continued*.

No. 141.—Hammer.

CLASS I.
Perth—
Abernethy, No. 1.



CLASS II.
Perth—
Dunfallandy.



No. 142.—Anvil(?).

CLASS I.
Abernethy, No. 1.



CLASS II.
Perth—
Dunfallandy.



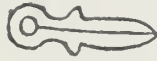
No. 143.—Pincers.

CLASS I.
No examples.



CLASS II.
Perth—
Dunfallandy.
Wigtown—
Kirkcolm.

LOCALITIES OF THE DIFFERENT SYMBOLS—*continued.*



No. 144.—Shears.

CLASS I.
No examples.

CLASS II
Aberdeen—
Migvie.



No. 145.—Crozier.

CLASS I.
No examples.

CLASS II.
Forfar—
St Vigean's, No. 4.



No. 146.—Centaur.

CLASS I.
No examples.

CLASS II.
Forfar—
Aberlemno, No. 3.
Glamis, No. 2 (front).
Perth—
Meigle, No. 2.

LOCALITIES OF THE DIFFERENT SYMBOLS—*continued.*

No. 147.—Beast with Long Jaws, Crest, and Scroll-Feet

CLASS I.

- Inverness*—
 Congash, No. 1.
Banff--
 Inveravon, No. 3.
Aberdeen--
 Crichie.
 Dyce, No. 1.
 Fyvie, No. 1.
 Kintore, No. 1 (back).
 " No. 2 (front).
 " No. 2 (back).
 Logie Elphinstone, No. 3.
 Rhynie, No. 1.
 " No. 4.
 Tullich.
Forfar--
 Linlathen.
 Strathmartine, No. 1.
Perth--
 Bruceton.

CLASS II.

- Caithness*--
 Ulbster (back).
Sutherland--
 Golspie.
Ross--
 Shandwick.
Nairn--
 Glenferness (twice).
Elgin--
 Brodie.
Aberdeen--
 Maiden Stone (back).
Forfar--
 Balluderon.
 Eassie.
 Strathmartine, No. 3.
 " No. 6.
Perth--
 Dunfallandy (twice).
 St Madoes, No 1.
 Meigle, No. 1 (back).
 " No. 4.
 " No. 5.
 Rossie (back).
Fife--
 Largo.
 Scoonie.

CAVES.

Fife—E. Wemyss (Jonathan's Cave, W. Doocot Cave, and Court Cave).

LOCALITIES OF THE DIFFERENT SYMBOLS—*continued.*



No. 148.—Bull, or Cow.

CLASS I.
Inverness—
 Inverness, No. 1.
 „ No. 2.
Elgin—
 Burghead, No. 1.
 „ No. 2.
 „ No. 3.
 „ No. 4.
 „ No. 5.
 „ No. 6.

CLASS II.
Caithness—
 Ulbster.



No. 149.—Bull's Head and Serpent.

CLASS I.
 No examples.

CLASS II.
Banff—
 Mortlach.



No. 150.—Boar.

CLASS I.
Inverness—
 Dores (?).
 Knocknagael.

CLASS II.
 No examples used alone as symbols.

LOCALITIES OF THE DIFFERENT SYMBOLS—*continued.*

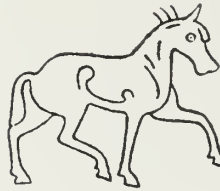
No. 151.—Lion (?).

CLASS I.
No examples.

CLASS II.
Shetland—
Bressay.
Pabil.
Caithness—
Ulbster (back).
Banff—
Mortlach (front).

CAVES.

Fife—East Wemyss (Jonathan's Cave).



No. 152.—Horse.

CLASS I.
Aberdeen—
Inverury, No. 4.

CLASS II.
No examples used alone as symbols.



No. 153.—Stag.

CLASS I.
Elgin—
Grantown.

CLASS II.
No examples used alone as symbols.

LOCALITIES OF THE DIFFERENT SYMBOLS—*continued.*



No. 154.—Wolf.

CLASS I.

- Ross*—
Ardross, No. 1.
Aberdeen—
Newbiggin Leslie.
Forfar—
Keillor.



CLASS II.

No examples used alone as symbols.



No. 155.—Beast's Head.

CLASS I.

- Ross*—
Ardross, No. 2.
Inverness—
Dunnachton.
Aberdeen—
Rhynie, No. 5.



CLASS II.

- Forfar*—
Glamis, No. 2 (front).
Monifieth, No. 2.
Perth—
Meigle, No. 1 (back).
Rossie (front).

CAVES.

Fife—E. Wemyss (W. Doocot Cave).

METAL-WORK.

Forfar—Monifieth. | *Fife*—Nonie's Law.

LOCALITIES OF THE DIFFERENT SYMBOLS—*continued.*

No. 156.—Bird.

CLASS I.
Ross—
 Strathpeffer.
Elgin—
 Birnie.
Banff—
 Inveravon, No. 1.
Aberdeen—
 Fyvie, No. 2.
 Tillytarmont.
 Tyrie.

CLASS II.
Ross—
 Nigg.
Banff—
 Mortlach (back).
Forfar—
 St Vigean's, No. 1.
 „ No. 2.

CAVES.

Fife—E. Wemyss (W. Doocot Cave).



No. 157.—Fish.

CLASS I.
Sutherland—
 Dunrobin.
Ross—
 Edderton.
Inverness—
 Drumbuie, No. 2.
Aberdeen—
 Keith Hall.
 Kintore, No. 1 (front).
 Percylieu.
 Rhynie, No. 1.
Kincardine—
 Stonehaven, No. 2.

CLASS II.
Cairnness—
 Ulbster (back).
Sutherland—
 Golspie.
Forfar—
 Glamis, No. 2 (back).
 St Vigean's, No. 1.
Perth—
 Meigle, No. 1 (back).

CAVES.

Elgin—Covesea.

Fife—E. Wemyss (Jonathan's Cave).

LOCALITIES OF THE DIFFERENT SYMBOLS—*continued.*



No. 158.—Sea-Horse.

CLASS I.

No examples.

CLASS II.

- Forfar*—
 Aberlemno, No. 2 (front).
 Kettins.
Perth—
 Meigle, No. 1 (front).
 „ No. 26.
 Murthly.



No. 159.—Hippocampus.

CLASS I.

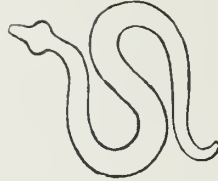
No examples.

CLASS II.

- Caithness*—
 Skinnet (front).
 Ulbster (back).
Elgin—
 Brodie.
Banff—
 Mortlach (front).
Aberdeen—
 Maiden Stone (front).
Forfar—
 Monifieth, No. 3.
Perth—
 Meigle, No. 1 (front).

ROCK-SURFACE.

Kirkcubright—Anwoth.

LOCALITIES OF THE DIFFERENT SYMBOLS—*continued.*

No. 160.—Serpent.

CLASS I.

Sutherland—
 Kirtomy.
Elgin—
 Knockando.
Forfar—
 Aberlemno, No. 1.

CLASS II.

Cairness—
 Ulbster (front).
Sutherland—
 Golspie.
Banff—
 Mortlach (back).
Forfar—
 Glamis, No. 1 (back).
 „ No. 2 (back).
 Inchbrayock, No. 1.
 Kinell.
 Strathmartine, No. 2.



No. 161.—Serpent and Z-shaped Rod.

CLASS I.

Inverness—
 Drumbuie, No. 1.
Aberdeen—
 Insch.
 Inverury, No. 1.
 Newton in the Garioch.

CLASS II.

Ross—
 Tarbet, No. 1.
Forfar—
 Balluderon.
 St Vigean's, No. 2.
Perth—
 Gask.
 Logierait.
 Meigle, No. 1 (back).

LOCALITIES OF THE DIFFERENT SYMBOLS—*continued.*



No. 162.—Flower.

CLASS I.
Sutherland—
 Craigton, No. 1.
Hebrides—
 Pabbay.
Forfar—
 Dunnichen.

CLASS II.
Caithness—
 Ulbster (front).
Sutherland—
 Golspie.
Forfar—
 Glamis, No. 1 (front).
Perth—
 Gask.



CAVES.

Fife—E. Wemyss (W. Doocot Cave).

III. THE FOLLOWING TABLE SHOWS THE COMBINATIONS OF SYMBOLS WHICH OCCUR ON EACH MONUMENT:—

CLASS I.

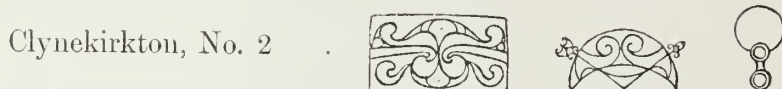
<i>SHETLAND</i> —			
Sandness			
<i>ORKNEY</i> —			
Firth			
S. Ronaldsay, Front			
S. Ronaldsay, Back			

COMBINATIONS OF SYMBOLS ON MONUMENTS OF CLASS I.—*continued.*


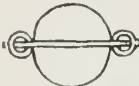










CAITHNESS—





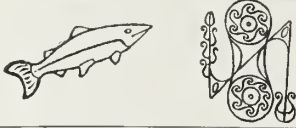







SUTHERLAND—



COMBINATIONS OF SYMBOLS ON MONUMENTS OF CLASS I.—*continued.*

Kintradwell, No. 2		
Kintradwell, No. 3		
Kintradwell, No. 4		
Kirtomy		
Little Ferry Links, No. 1		
Little Ferry Links, No. 2		
Little Ferry Links, No. 3	(Indeterminate fragment of disc only.)	
Little Ferry Links, No. 4		
<i>ROSS—</i>		
Ardross, No. 1		
Ardross, No. 2		

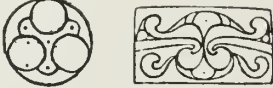




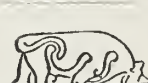
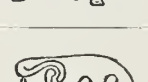



COMBINATIONS OF SYMBOLS ON MONUMENTS OF CLASS I.—*continued.*

Dingwall, Front	
Dingwall, Back	
Edderton, No. 1	
Strathpeffer	
Roskeen	
<i>INVERNESS</i> —	
Balblair	
Congash, No. 1	
Congash, No. 2	
Dores	
Drumbuie, No. 1	

COMBINATIONS OF SYMBOLS ON MONUMENTS OF CLASS I.—*continued.*

Drumbuie, No. 2			
Dunnachton			
Findlarig			
Inverallan			
Inverness, No. 1			
Inverness, No. 2			
Knocknagael			
Lynchurn			
Moniack			

COMBINATIONS OF SYMBOLS ON MONUMENTS OF CLASS I.—*continued.*

<p><i>HEBRIDES</i>— Benbecula</p>	
<p>Pabbay</p>	
<p><i>ELGIN</i>— Birnie, No. 1</p>	
<p>Burghead, No. 1</p>	
<p>Burghead, No. 2</p>	
<p>Burghead, No. 3</p>	
<p>Burghead, No. 4</p>	
<p>Burghead, No. 5</p>	
<p>Burghead, No. 6</p>	
<p>Drainie, No. 1</p>	






















COMBINATIONS OF SYMBOLS ON MONUMENTS OF CLASS I.—*continued.*

Grantown			
Kockando, No. 1			
Kockando, No. 2			
Upper Manbean			
<i>BANFF</i> — Arndilly			
Balneilean			
Inveravon, No. 1			
Inveravon, No. 2			
Inveravon, No. 3			
N. Redhill		(Doubtful; seems to have been tampered with.)	

COMBINATIONS OF SYMBOLS ON MONUMENTS OF CLASS I.—*continued.*

<i>ABERDEEN—</i>				
Bourtie				
Clatt, No. 1				
Clatt, No. 2		(Doubtful ; rectangle, or crescent.)		
Crichie				
Daviot				
Old Deer				
Drimmies				
Dyce, No. 1				
Fetter Angus				
Fyvie, No. 1				

COMBINATIONS OF SYMBOLS ON MONUMENTS OF CLASS I.—*continued*

Fyvie, No. 2 . . .				
Huntly				
Insch				
Inverury, No. 1				
Inverury, No. 2				
Inverury, No. 3				
Inverury, No. 4				
Keith Hall				
Kinellar				
Kintore, No. 1, Front				


















COMBINATIONS OF SYMBOLS ON MONUMENTS OF CLASS I.—*continued.*

Kintore, No. 1, Back . . .			
Kintore, No. 2, Front . . .			
Kintore, No. 2, Back . . .			
Kintore, No. 3			
Leys of Dummuies			
Logie Elphinstone, No. 1.			
Logie Elphinstone, No. 2.			
Logie Elphinstone, No. 3.			
Newbiggin Leslie			
Newton			



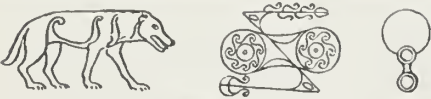







COMBINATIONS OF SYMBOLS ON MONUMENTS OF CLASS I.—*continued.*

Mill of Newton			
Park			
Pereylieu			
Rhyrie, No. 1			
Rhyrie, No. 2			
Rhyrie, No. 3	Man.		
Rhyrie, No. 4			
Rhyrie, No. 5			
Rhyrie, No. 6			
Rothie Brisbane			

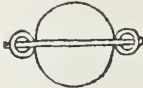



COMBINATIONS OF SYMBOLS ON MONUMENTS OF CLASS I.—*continued.*

Tillytarmont			
Tullich			
Tyrie			
<i>KINCARDINE</i> —			
Stonehaven, No. 1			
Stonehaven, No. 2			
Stonehaven, No. 3			
Stonehaven, No. 4			
Stonehaven, No. 5			
Stonehaven, No. 6			
<i>FORFAR</i> —			
Aberlemno, No. 1			

COMBINATIONS OF SYMBOLS ON MONUMENTS OF CLASS I.—*continued.*

Baggerton	
Dunnichen	
Keillor	
Linlathen	
Strathmartine, No. 1	
<i>PERTH</i> —	
Abernethy, No. 1	
Bruceton	
Cargill	
Dunkeld	
Strowan	



















COMBINATIONS OF SYMBOLS ON MONUMENTS OF CLASS I.—*continued.*

<i>FIFE</i> —			
Lindores			
<i>EDINBURGH</i> —			
Edinburgh			



ROCK-SURFACE.

<i>KIRKCUDBRIGHT</i> —			
Anwoth			
















CAVES.

<i>ELGIN</i> —						
Covesca						
<i>FIFE</i> —						
Dysart, Glass-House Cave						
Dysart, Sloping Cave						
Dysart, Jonathan's Cave						
						Man.



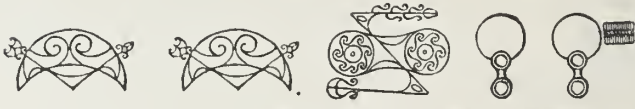


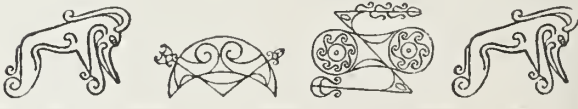




COMBINATIONS OF SYMBOLS ON MONUMENTS OF CLASS I.—*continued.*

Dysart, W. Doocot Cave				
				
Dysart, Court Cave				Man

CLASS II.

<i>CAITHNESS—</i>				
Skinnet				
Ulster, Front				
Ulster, Back				
				
<i>SUTHERLAND—</i>				
Golspie				Man.
				
	Serpents.			



















COMBINATIONS OF SYMBOLS ON MONUMENTS OF CLASS II.—*continued.*

<p><i>ROSS</i>— Hilton of Cadboll</p>	
<p>Nigg</p>	
<p>Rosemarkie, No. 1</p>	
<p>Shandwick</p>	
<p>Tarbet, No. 1</p>	
<p><i>NAIRN</i>— Glenferness</p>	
<p><i>ELGIN</i>— Brodie</p>	
<p>Elgin</p>	
<p><i>BANFF</i>— Mortlach, Front</p>	
<p>Mortlach, Back</p>	

COMBINATIONS OF SYMBOLS ON MONUMENTS OF CLASS II.—*continued.*

<i>ABERDEEN—</i>				
Dyce, No. 2				
Formaston				
Maiden Stone, Front				
Maiden Stone, Back				
Migvie				
Monymusk				
<i>KINCARDINE—</i>				
Fordoun				
<i>FORFAR—</i>				
Aberlemno, No. 2, Front				
Aberlemno, No. 2, Back				
Aberlemno, No. 3				

COMBINATIONS OF SYMBOLS ON MONUMENTS OF CLASS II.—*continued.*

Balluderon			
Cossins			
Eassie			A tree.
Glamis, No. 1, Front			
Glamis, No. 1, Back	Beast.		
Glamis, No. 2, Front			
Glamis, No. 2, Back			
Inchbrayock, No. 1			
Kettins			

COMBINATIONS OF SYMBOLS ON MONUMENTS OF CLASS II.—*continued.*

Kinell	
Kingoldrum, No. 1	
Kirriemuir, No. 1	
Kirriemuir, No. 2	
Monifieth, No. 1	
Monifieth, No. 2	
Monifieth, No. 3	
Strathmartine, No. 2	
Strathmartine, No. 3	

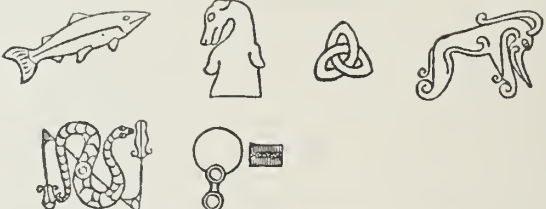









COMBINATIONS OF SYMBOLS ON MONUMENTS OF CLASS II.—*continued.*

Strathmartine, No. 4	Beast.				
Strathmartine, No. 5					
Strathmartine, No. 6					
St Vigean's, No. 1					
St Vigean's, No. 2					
St Vigean's, No. 3					
St Vigean's, No. 4					
St Vigean's, No. 5					
St Vigean's, No. 6					





COMBINATIONS OF SYMBOLS ON MONUMENTS OF CLASS II.—*continued.*

<p>Woodway</p>	
<p><i>PERTH</i>— Alyth</p>	
<p>Dunfallandy</p>	
<p>Fowlis Wester</p>	
<p>Gask</p>	
<p>Logierait</p>	
<p>St Madoes, No. 1</p>	
<p>Meigle, No. 1, Front</p>	






COMBINATIONS OF SYMBOLS ON MONUMENTS OF CLASS II.—*continued.*

Meigle, No. 1, Back	
Meigle, No. 2	
Meigle, No. 3	
Meigle, No. 4	
Meigle, No. 5	
Meigle, No. 6	
Meigle, No. 7	
Meigle, No. 8	
Meigle, No. 9	
Murthly	





COMBINATIONS OF SYMBOLS ON MONUMENTS OF CLASS II.—*continued.*

Rossie, Front	
Rossie, Back	
<i>FIFE</i> — Largo	
Scoonie	


SYMBOLS OCCURRING ON OBJECTS OF METAL.

<i>ABERDEEN</i> — Parkhill (silver chain)	
<i>FORFAR</i> — Monifieth (bronze plate), Front	
Monifieth (bronze plate), Back	
<i>FIFE</i> — Norrie's Law (silver plate No. 1)	
Norrie's Law (silver plate No. 2)	

COMBINATIONS OF SYMBOLS ON MONUMENTS OF CLASS II.—*continued.*

Norrie's Law (silver pin)		
<i>DUMFRIES</i> — Drumlanrig (silver chain)		

SYMBOLS OCCURRING ON OBJECTS OF BONE.























<i>ORKNEY</i> — Broch of Burrian . . .		
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SYMBOLS OCCURRING ON OBJECTS OF STONE.

<i>ORKNEY</i> — Broch of Burrian . . .		
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IV. RELATIVE FREQUENCY OF OCCURRENCE OF THE SYMBOLS.




The following table shows the relative frequency with which the symbols occur on the two classes of monuments, the caves, rock surfaces, and objects of metal and bone :—

SYMBOLS.	Class I.	Class II.	Caves.	Rocks.	Objects of Metal and Bone.	SYMBOLS.	Class I.	Class II.	Caves.	Rocks.	Objects of Metal and Bone.
	6	1	...	...	...		11	...	2	...	...
	1	1	...	...	...		...	1	...	...	...
	4	10	4	...	...		3	...	1	...	1
	27	22	1	1	3		2	1	1	...	...
	7	5	..	...	..		10	2	3	...	...
	8	2	1	...	...		...	2	1	...	...
	3	...	...	...	1		1	2	...	...	...
	3	3	...	...	...		...	1	...	...	...
	40	19	...	...	2		7	1	...	...	...
	1	1	...	...	...		...	...	1	..	1
	1	...	...	...	...		7	2	...	...	...







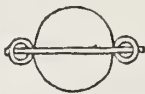
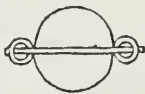
SYMBOLS.	Class I.	Class II.	Caves.	Rocks.	Objects of Metal and Bone.	SYMBOLS.	Class I.	Class II.	Caves.	Rocks.	Objects of Metal and Bone.
	...	1	...	...	...		...	4	1	...	...
	31	13	...	...	...		1	...	...	...	...
	1	1	..	...	..		1	...	...	...	..
	1	1	...	...	...		3	...	...	...	...
	...	2	...	...	...		3	4	1	...	2
	...	1	...	...	...		6	4	...	...	...
	...	1	...	...	...		8	5	2	...	...
	15	18	3	...	...		...	4	...	...	...
	...	3	...	...	...		...	8	...	1	...
	8	..	1	...	...		3	8	...	...	...
	...	1	...	...	...		4	6	...	...	...
	2	...	...	...	...		3	4	1	...	...





















In the following table the symbols are arranged in order according to the frequency with which they occur on the two classes of monuments :—

SYMBOLS.	Class I.	Class II.	Totals.	SYMBOLS.	Class I.	Class II.	Totals.
	40	19	59		6	4	10
	27	22	49		8	2	10
	31	13	44		7	2	9
	15	18	33		...	8	8
	4	10	14		8	...	8
	8	5	13		3	4	7
	7	5	12		3	4	7
	10	2	12		6	...	6
	11	...	11		5	1	6
	3	8	11		2	3	5
	4	6	10		...	4	4

SYMBOLS.	Class I.	Class II.	Totals.	SYMBOLS.	Class I.	Class II.	Totals.
	3	...	3		1	2	3
	3	...	3				

The following table shows the geographical distribution of the symbols of most common occurrence:—

SYMBOLS.	Counties.	Class I.	Class II.	Totals.	SYMBOLS.	Counties.	Class I.	Class II.	Totals.
	Orkney .	3	...	3		Shetland .	1	...	1
	Caithness	1	2	3		Caithness	1	...	1
	Sutherland	7	1	8		Sutherland	5	...	5
	Ross .	3	4	7		Ross .	...	2	2
	Inverness	3	...	3		Inverness	1	...	1
	Hebrides .	1	...	1		Elgin .	2	...	2
	Nairn .	...	1	1		Banff .	2	...	2
	Elgin .	2	1	3		Aberdeen	15	2	17
	Banff .	1	...	1		Forfar	3	6	9
	Aberdeen	15	1	16		Perth .	...	2	2
	Forfar .	1	3	4					
Perth .	1	6	7						
Edinburgh	1	...	1						
	Ross .	2	2	4		Caithness	...	1	1
	Inverness	3	...	3		Sutherland	1	1	2
	Nairn .	...	1	1		Ross .	1	...	1
	Elgin .	...	2	2		Inverness	1	...	1
	Aberdeen	15	2	17		Aberdeen	4	...	4
	Kincardine	3	1	4		Kincardine	1	...	1
	Forfar .	3	10	13		Forfar .	...	2	2
	Perth .	1	3	4		Perth .	...	1	1
	Caithness	...	1	1		Caithness	...	1	1
	Sutherland	...	1	1		Sutherland	...	1	1
	Ross .	...	1	1		Ross .	...	1	1
	Inverness	1	...	1		Inverness	1	...	1
	Nairn .	...	2	2		Aberdeen	3	...	3
	Elgin .	...	1	1		Forfar .	...	3	3
	Banff .	1	...	1		Perth .	...	4	4
	Aberdeen	10	1	11					
	Forfar .	2	4	6					
	Perth .	1	7	8					
Fife .	...	2	2						
	Sutherland	1	...	1		Sutherland	1	...	1
	Banff .	1	...	1		Banff .	1	...	1
	Aberdeen	3	2	5		Aberdeen	3	2	5
	Forfar .	...	3	3		Forfar .	...	3	3
	Fife .	1	...	1		Fife .	1	...	1

SYMBOLS.	Counties.	Class I.	Class II.	Totals.	SYMBOLS.	Counties.	Class I.	Class II.	Totals.
	Shetland Caithness Sutherland Ross Inverness Aberdeen Perth	1 1 1 1 1 5 1	... ... ... ... ... ... ...	1 1 1 1 1 5 1		Caithness Inverness Elgin	... 2 6	1	1 2 6
	Shetland. Orkney Sutherland Hebrides Elgin Aberdeen	1 2 3 1 1 2	... ... 1	1 2 4 1 1 2		Ross Inverness Aberdeen Forfar Perth	1 1 1 ... ...	... ... ... 2 2	1 1 1 2 2
	Caithness Sutherland Elgin Banff Forfar	... 1 1 ... 1	... 1 ... 1 5	1 2 1 1 6		Caithness Sutherland Hebrides. Forfar Perth	... 1 1 1 ...	1 1 ... 1 1	1 2 1 2 1
	Ross Inverness Aberdeen Forfar Perth	... 1 3 ... ...	... 1 ... 2 3	1 1 3 2 3		Ross Hebrides Elgin Banff Aberdeen Forfar	1 1 1 1 2 ...	... ... ... ... 1 1	1 1 1 1 2 1
	Ross Inverness Aberdeen Forfar Perth	... 1 3 ... ...	... 1 ... 2 3	1 1 3 2 3		Sutherland Ross Aberdeen Perth	3 ... 1 1	... 1	3 1 1 1
	Ross Elgin Banff Aberdeen Forfar	1 1 1 3 ...	1 1 2	2 2 1 3 2		Sutherland Ross Aberdeen Forfar Perth	1 1 1 ... ...	... ... ... 2 1	1 1 1 2 1
	Inverness Banff Aberdeen	2 2 4	... ... 2	2 2 6		Forfar Perth	... ...	1 3	1 3
	Sutherland Inverness Elgin Banff Aberdeen Forfar	1 2 1 1 2 ...	... ... ... ... 1 ...	1 2 1 1 3 1		Orkney Caithness Sutherland	1 1 1	... ... ...	1 1 1
	Caithness Elgin Banff Aberdeen Forfar Perth	... ... ... ... ... ...	... 1 1 1 2 1	2 1 1 1 2 1		Sutherland Aberdeen	2 1	... ...	2 1
	Ross Caithness Forfar	1 ... ...	... 1 1	1 1 1		Ross Caithness Forfar	1 ... ...	... 1 1	1 1 1

The geographical distribution of the symbols proves beyond the shadow of a doubt that the system of the symbolism was a general one applicable to the whole area over which they are found. Except in the case of the Burghead bulls, which are confined exclusively to one district, the symbols are equally distributed over the whole of the east of Scotland. It will be observed that examples of every one of the most common symbols occur in Aberdeenshire, and in greater numbers than in any of the other counties, confirming the theory already deduced from the geographical distribution of the monuments, that the symbols were invented in Aberdeenshire and spread thence northwards and southwards to other parts of Scotland. The range of each of the symbols is nearly the same, extending from Shetland or Caithness on the north to Perthshire or Fifeshire on the south. As a general rule, a particular symbol is never confined to a particular district, so that the idea of their being tribal badges may be looked upon as finally exploded. When the total number of specimens of any particular symbol in Scotland is less than that of any other, it is not because it occurs in fewer counties, but because there are fewer examples in each county.

With about half a dozen exceptions, the symbols which are found on the monuments belonging to Class I. are the same as those found on the monuments belonging to Class II., but the relative proportions of each vary.

The following symbols occur with nearly the same frequency on each class of monument:—



; the following twice as often on

the rude pillar stones as on the upright cross-slabs—




; the following three times as often—



; the following five times as often—






; the


following ten times as often—; and the following occur on the rude pillar stones only, but not at all on the upright cross-slabs—




The , , and  are the only symbols found on the

monuments belonging to Class II. of which there are no instances on the monuments belonging to Class I. It seems probable that the symbols which are conspicuous by their absence on the upright cross-slabs are the

more archaic than the rest; especially as the  and  are to be seen on the walls of the E. Wemyss caves, the  on the terminal

link of the Parkhill chain, and the  on the bone from the Broch of Burrian, all of which appear from their associations to be of earlier date than the highly-ornamented sculptured slabs.


The , which is so rare on the monuments belonging to Class II., occurs in the caves at Covesea, and also at E. Wemyss, and is possibly also one of the older symbols.


The symbols on the rude pillar stones are nearly always arranged in groups of two or three, although there is at least one exception—a stone at Inverury (No. 1), which has a group of four. The proportion of the number of stones having two symbols to those having three is about 50 to 30, but it must be remembered that in some cases the stones with only two symbols are broken or defaced, and may have possessed a third symbol when perfect. There are several stones having one symbol only, but they are almost all fragments.

The groups of symbols on the upright cross-slabs are often numerically much larger.

The stone at Uster has as many as 8 symbols on one face, and at least 2 on the other; that at Golspie has 7; one at Meigle (No. 1), 6; one at

Dunfallandy, 5; and those at Cadboll, Rosemarkie, Glenferness, and Dyce, 4.

The position and arrangement of the symbols varies a good deal. For instance, the most common position of the  is with the point of the V facing downwards, but occasionally (as at Rossie Priory) it is

placed sideways, thus . Sometimes the symbols are arranged in a





vertical row one below the other; or, again, in a horizontal row, or distributed irregularly over the surface of the slab. The order in which the symbols occur also varies, but so much caprice is shown, both in this respect and in their position and arrangement, that it is probable the meaning is not affected by any such considerations.








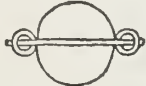










It is not at all easy to analyse the different combinations of symbols, or to found any theory as to their meaning upon the way in which they are associated together; but a certain amount of light may, perhaps, be thrown on a somewhat obscure subject by the following classified lists of the combinations of the four most common symbols, and with the localities where they occur:—
































CLASS I.

Combinations of Two Symbols.



		Firth. S. Ronaldsay. Clynekirkton, No. 1. Old Deer.
		Findlarig. Inverallan. Mill of Newton.

		<p>Crichie. Kintore, No. 1 (back). Logie Elphinstone, No. 3. Strathmartin, No. 1.</p>
		<p>Logie Elphinstone, No. 1.</p>
		<p>Logie Elphinstone, No. 2.</p>
		<p>Lindores.</p>
		<p>Thurso.</p>
		<p>Pabbay.</p>
		<p>Kinellar. Dingwall (back).</p>
		<p>S. Ronaldsay (back).</p>
		<p>Kintradwell, No. 3.</p>

Combinations of Three Symbols.

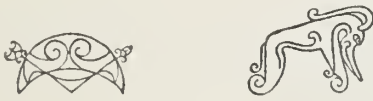
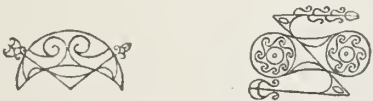
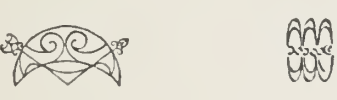
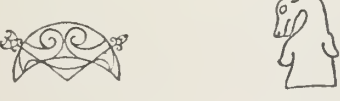
			Fyvie, No. 1. Rhynie, No. 4.
			Clynekirkton, No. 2.
			Bourtie.
			Inveravon, No. 2.
			Clynemilton.
			Daviot.
	?		Park. Rhynie, No. 6.
			Knockando.
			Craigton.
			Dingwall (front).

Combinations of Four Symbols.



	<p>Inverury, No. 1.</p>
	<p>Abernethy.</p>

CLASS II.





Combinations of Two Symbols.

	<p>Meigle, No. 4. Rossic.</p>
	<p>Elgin. Aberlemno. Cossins.</p>
	<p>Skinnet.</p>
	<p>Monifieth, No. 2.</p>


Combinations of Three Symbols.

	<p>Tarbet, No. 1.</p>
	<p>St Madoes, No. 1.</p>


Combinations of Four Symbols.

	Hilton of Cadboll.
	Rosemarkie, No. 1.
	Glenferness.
	Dyce.

Combinations of Five Symbols.

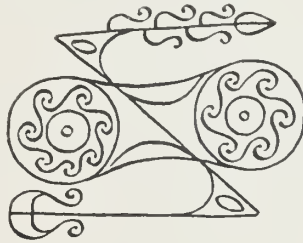
	Dunfallandy.
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Combinations of Six Symbols.

	Golspie.
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Combinations of Eight Symbols.

	<p>Ulster.</p>
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CLASS I.

Combinations of Two Symbols.

		<p>Dyce. Kintore, No. 2 (front).</p>
		<p>Moniack.</p>
		<p>Logie Elphinstone, No. 2.</p>
		<p>Congash.</p>

Combinations of Three Symbols.

			Bourtie.
			Tullich.
			Keith Hall.
			Insch.
			Aberlemno, No. 1.
			Rhynie, No. 5.
			Dunnichen.
			Keillor.
			Clatt.

Combinations of Four Symbols.

				<p>Inverury, No. 1.</p>
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CLASS II.


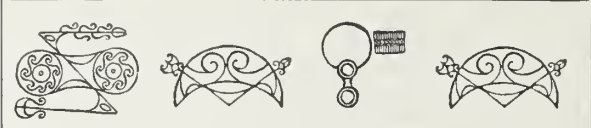
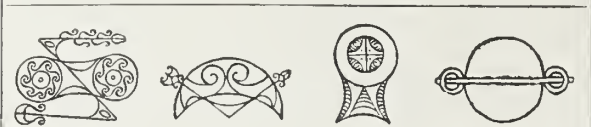
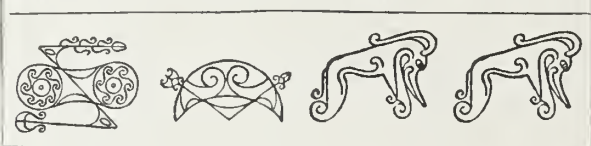
Combinations of Two Symbols.

		<p>Elgin. Aberlemno. Cossins.</p>
		<p>Migvie.</p>

Combinations of Three Symbols.

			<p>St Madoes, No. 1.</p>
			<p>St Vigean's, No. 1.</p>
			<p>Brodie.</p>
		<p>?</p>	<p>Eassie.</p>
			<p>Monifieth, No. 1.</p>

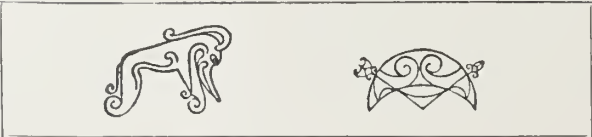
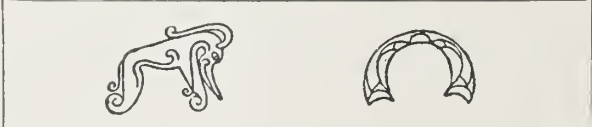
Combinations of Four Symbols.







	<p>Hilton of Cadboll.</p>
	<p>Rosemarkie, No. 1.</p>
	<p>Dyce.</p>
	<p>Glenferness.</p>









CLASS I.

Combinations of Two Symbols.

	<p>Crichie. Kintore, No. 1 (back). Logie Elphinstone, No. 3. Strathmartin, No. 1.</p>
	<p>Congash, No. 1. Bruceton.</p>







		Dyce. Kintore, No. 2 (front).
		Kintore, No. 2 (back).
		Rhynie, No. 1.





Combinations of Three Symbols.

			Fyvie, No. 1. Rhynie, No. 4.
			Tullich.












CLASS II.

Combinations of Two Symbols.





		Meikle, No. 4. Rossie.
		Shandwick.
		Meikle, No. 5.

		Strathmartin, No. 3.
		Balluderon.

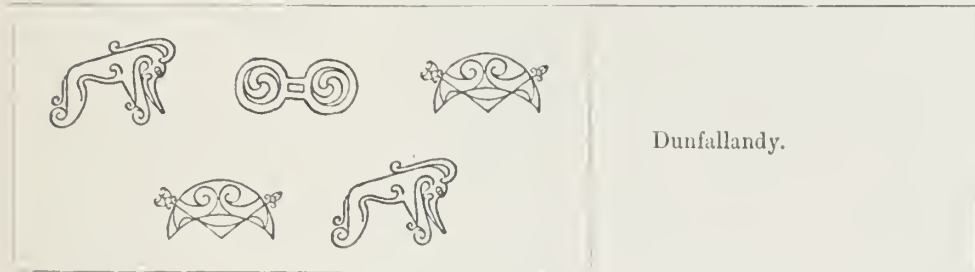
Combinations of Three Symbols.

			Brodie.
		?	Eassie.
			St Madoes, No. 1.
			Maiden Stone.

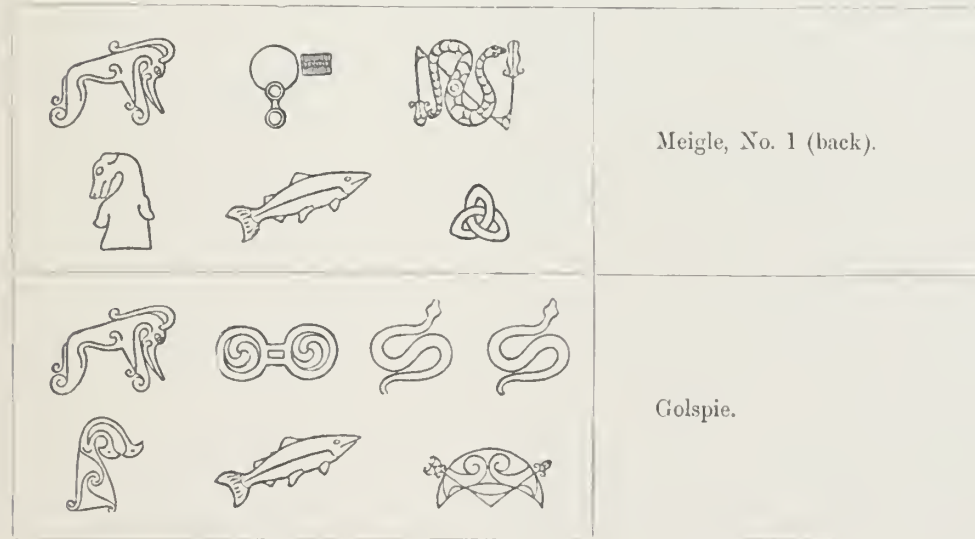
Combinations of Four Symbols.

				Glenferness.
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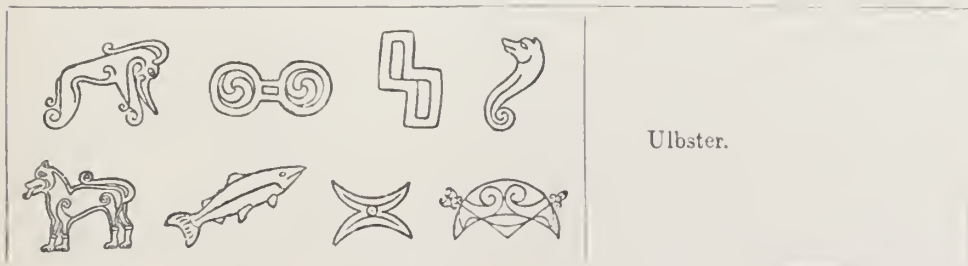
Combinations of Five Symbols.

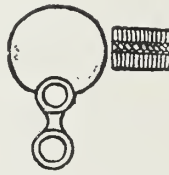


Combinations of Six Symbols.



Combinations of Eight Symbols.





























CLASS I.






























Combinations of Two Symbols.

		Kintradwell, No. 3. Edinburgh.
		Craigton, No. 2.
		Kintore, No. 2 (back).
		Upper Manbean.
		Knockando, No.

Combinations of Three Symbols.


			Fyvie, No. 1. Rhyrie, No. 4.
			Clynekirkton.

			Clynemilton.
			Bourtie.
			Inveravon, No. 2.
			Daviot.
		?	Rhynie, No. 6. Park.
			Tullich.
			Keith Hall.
			Insch.
			Aberlemno.






			Rhynie, No 5.
			Dunnichen.
		Beast.	Keillor.
			Sandside.
			Drumbuie, No. 2.
			Inveravon, No. 1. Tillytarment.
			Sandness.
			Drimmies.
			Newbiggin Leslie.
			Dunrobin.

CLASS II.



Combinations of Two Symbols.

	<p>Kirriemuir, No. 1.</p>
	<p>St Vigean's, No. 2.</p>



Combinations of Three Symbols.

	<p>Monifieth, No. 1.</p>
	<p>St Vigean's, No. 1.</p>
	<p>Kingoldrum, No. 1.</p>
	<p>Maiden Stone.</p>
	<p>Glamis, No. 2 (back).</p>



Combinations of Four Symbols.



	Hilton of Cadboll.
	Rosemarkie, No. 1.



Combinations of Six Symbols.


	Meikle, No. 1 (back).
	

Until some further clue is obtained, the way in which the various symbols are combined does not seem to give any key to explain their meaning. For the present it must be sufficient to notice certain peculiarities in the grouping. The two symbols which are most frequently associated

together are the  and . They occur nine times on the pillar stones of Class I., and four times on cross-slabs of Class II. The

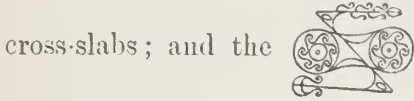
next most common combination is the  and , which occurs nine times on pillar stones and twice on cross-slabs. After these

come the  and , which occur together three times

on pillar stones and eight times on cross-slabs; the  and



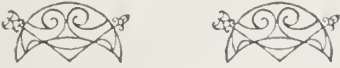

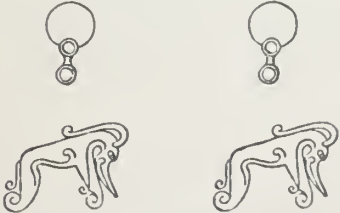
, which occur five times on pillar stones and five times on



cross-slabs; and the  and , which occur three times

on pillar stones and three times on cross-slabs. In fact the four symbols which are most common are found most frequently in combination.

The same symbol is sometimes repeated more than once on the same stone, as in the following instances:—

	<p>Dingwall, Knockando, No. 1, } Class I.</p> <p>Rosemarkie, } Dunfallaudy, } Class II.</p>
	<p>Moniack, Class I.</p>
	<p>Rosemarkie, No. 1, } Glenferness, } Class II.</p>

One of the stones at Logie Elphinstone (No. 2) exhibits a unique example of a palimpsest sculpture, as one set of symbols has apparently been erased to make room for another.

In the case of the monuments belonging to Class I., the symbols are generally confined to one side of the slab, but the following are exceptions:—

S. Ronaldsay.
Dingwall.

Kintore, No. 1.
Kintore, No. 2.

The symbols on the monuments belonging to Class II. are usually sculptured in relief, like the rest of the design, and placed on the reverse

side to that bearing the cross. In the following there are symbols on both back and front —

Ulster.		Glamis, No. 2 (incised on back).
Maiden Stone.		Meigle, No. 1.
Aberlemno, No. 2.		Rossie.
Glamis, No. 1 (incised on back).		

The symbols on the stones at Tarbet (No. 1) and Meigle (No. 5) are carved on one of the narrow faces of the slab instead of on the broad face.

On the monuments belonging to Class I. the symbols occur alone, but on the monuments belonging to Class II. they are associated with figure subjects and ornament. It is not easy to say what relation the symbols bear to the figure subjects, and how far they are intended to be explanatory of the scenes depicted. Sometimes the symbols are placed in panels by themselves, so as to be quite isolated from the rest of the design, as at Rosemarkie (No. 1), Shandwick, and Aberlemno (No. 3), but in other cases they are evidently intended to form part of the figure subject with which they are included, as at Hilton of Cadboll, Kirriemuir (No. 2), and Dunfallandy. The connection is, however, not always so obvious, for occasionally the symbols, although not placed in a separate panel, are to a certain extent isolated from the figure subject by being arranged all together at the top of the slab, as at St Vigean's (No. 1) and Meigle (No. 1).

In the following instances the symbols are on the same side of the slab with the cross, and disposed irregularly on the back ground at each side of the shaft of the cross or below it:—

Skinnet (front).	Formaston.	Glamis, No. 2.
Skinnet (back).	Maiden Stone.	Kettins.
Ulster (front).	Migvie.	St Vigean's, No. 2.
Ulster (back).	Monymusk.	Dunfallandy.
Rosemarkie, No. 1.	Fordoun.	Gask.
Mortlach.	Balluderon.	Meigle, No. 3.
Dyce.	Glamis, No. 1.	Rossie.

VIII.—THE ORNAMENTAL DESIGNS SCULPTURED ON THE MONUMENTS.

The designs sculptured on the early Christian monuments of Scotland may be arranged under four heads, viz. :—

- | | | |
|---------------|--|----------------------|
| (1) Symbols. | \| | (3) Figure Subjects. |
| (2) Ornament. | | (4) Inscriptions. |

The symbols have already been dealt with, and we now come to the ornament, which is of three kinds—

- | | | | | |
|------------------|--|----------------|--|-----------------|
| (1) Geometrical. | \| | (2) Zoömorpic. | \| | (3) Foliageous. |
|------------------|--|----------------|--|-----------------|

The geometrical ornament may again be subdivided into—

- | | | |
|----------------------|--|--------------------|
| (a) Interlaced-work. | \| | (c) Step-patterns. |
| (b) Key-patterns. | | (d) Spirals. |

Each of these will be considered separately, but before going further it will be necessary to say a few words about the shapes of the surfaces to be decorated, the method of setting out the ornament, and the principles of symmetry.

SHAPES OF THE SURFACES TO BE DECORATED.

The shapes of the panels on the sculptured stones, into which the ornament has to be fitted, are regulated by the shapes of the cross, the slab, and the symbols. Thus rectangular panels result from subdividing the shaft of the cross, the background on each side of it, or the back of the slab, where there is no cross. Square panels are obtained by making the height and width of one of the rectangular panels equal, or are used in the centre of the cross of the form No. 104.

The raised circular bosses, the double disc and mirror case symbols, and the central part of crosses of the form No. 38 give round panels.

When the boss is of considerable size an annular space is formed by

placing a smaller circular panel in the centre of the boss. The rings connecting the arms of the crosses give four quadrants of an annular ring. The arched bases of some of the crosses form half an annular ring. The middle part of the crescent symbol between the two bars of the V-shaped rod also makes an approximation to the shape of the segment of an annular ring. Triangular panels bounded by straight lines do not occur, as a rule, in Celtic art; but the spandrels between the circular rings of the heads of the crosses, and the side and top of the rectangular slab, and the horns of the crescent symbol are approximately triangular in shape. The vesica-shaped panel occurs in the form of cross No. 107.

A figure bounded by four concave circular arcs occurs on the Glenferness stone, and is also the shape of the connecting bar of the double-disc symbol. The following different shaped panels are thus obtained:—



No. 163.—Rectangular Panel.



No. 164.—Square Panel.



No. 165.—Circular Panel.



No. 166.—Annular Panel.



No. 167.—Panel in shape of Quadrant of Annular Ring.



No. 168.—Panel in shape of Half of Annular Ring.



No. 169.—Triangular Panel, bounded by two Straight Lines and the Arc of a Circle.



No. 170.—Triangular Panel, bounded by one Straight Line and two Arcs of Circles.



No. 171.—Four-sided Panel, bounded by two Straight Lines and two Arcs of Circles.



No. 172.—Four-sided Panel, bounded by Arcs of Circles.

METHOD OF SETTING OUT THE ORNAMENT.

Underlying all kinds of ornament there is necessarily a skeleton, or framework, upon which the pattern is built up.¹ This skeleton consists of the simplest possible arrangement of straight lines, and is really the pattern reduced to its most elementary form. The more complicated patterns are derived from the simpler ones by adding fresh lines, and if the process be reversed by stripping the pattern of its superfluous lines, the skeleton will finally be reached. All ornament is, therefore, dependent on the geometrical properties of space. One of these properties is that there are only three regular figures—viz., the square, the equilateral triangle, and the hexagon—that will each completely cover a plane surface, when placed with their sides touching throughout, and their angles meeting in a point, all the figures being of the same shape and capable of being turned round into four, three, or six different positions, according to the number of angles and sides each figure has.



No. 173.

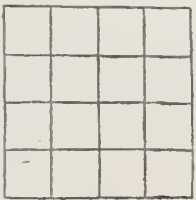


No. 174.

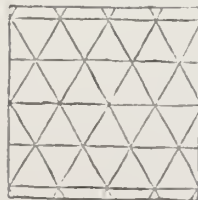


No. 175.

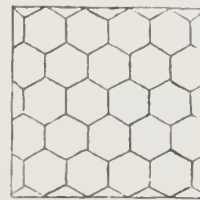
Thus four squares, or six equilateral triangles, or three hexagons may each be arranged round a point with their adjacent sides coinciding throughout their entire lengths. Every other corner of the figures can be treated in a similar way until the whole surface is covered.



No. 176.



No. 177.



No. 178.

¹ See Lewis F. Day's excellent little book on *The Anatomy of Pattern*.

These, then, are the three primary forms of geometrical surface ornament, out of which all others are developed. Only the first two—the squares and equilateral triangles—are used for the purposes of setting out patterns.

The hexagons are not used, because the lines bounding the figures do not run straight through in one direction, as in the other cases, and because any pattern founded on hexagons can be set out on a surface divided into equilateral triangles, six of which make up a hexagon.

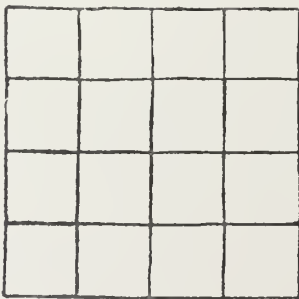
All ornament is therefore set out on one of two systems—the square or the triangular system.

In the former the surface to be decorated is divided into squares by two series of equidistant parallel lines cutting at right angles; and in the latter the surface is divided into triangles by three series of equidistant parallel lines intersecting in the same points at angles of 60° .

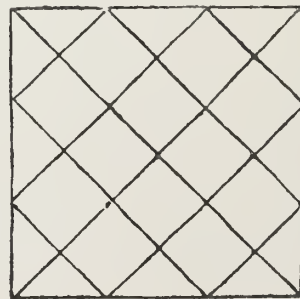
Pentagons, octagons, and other regular polygons are used in different styles of ornament, but they do not form the basis on which the pattern is founded. This can easily be tested by joining the centres of the figures, when it will be found that they lie in lines cutting each other either at right angles or at 60° .

The square system is the only one used in Celtic art, and therefore the only one we are concerned with.

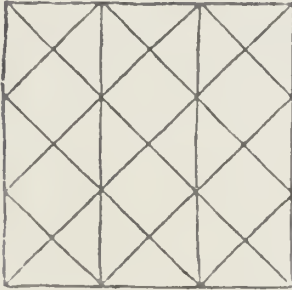
Modifications can be produced in the patterns (1) by altering the position of the lines forming the setting-out squares with regard to the margin; and (2) by sub-dividing the squares into two, four, or eight triangles, thus—



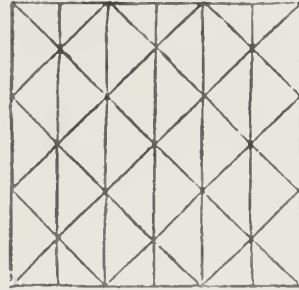
No. 179.—The Setting-out Squares placed so that the Lines forming them are parallel to the Horizontal and Vertical Margins respectively.



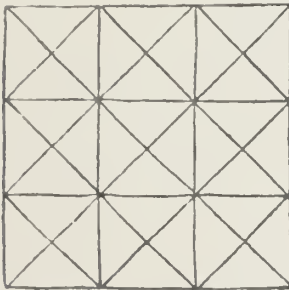
No. 180.—The Setting-out Squares placed diagonally with regard to the Margin.



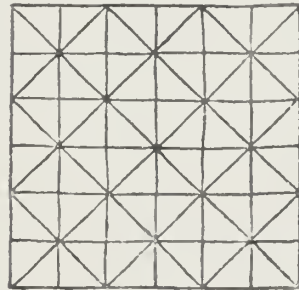
No. 181. — The Setting-out Squares placed diagonally with regard to the Margin, and every alternate Vertical Row of Squares subdivided into two Triangles by Vertical Lines.



No. 182. — The Setting-out Squares placed diagonally with regard to the Margin, and every Square subdivided into two Triangles by Vertical Lines.



No. 183. — The Setting-out Squares placed parallel to the Margin, and every Square subdivided into four Triangles by Diagonal Lines.



No. 184. — The Setting-out Squares placed parallel to the Margin, and every Square subdivided into eight Triangles by two Diagonal, Horizontal, and Vertical Lines.

The patterns may be further modified by making the distances between the two series of setting-out lines unequal, thus transforming the squares into rectangles; or by making the setting-out lines cut each other obliquely instead of at right angles, thus distorting the squares into rhombuses.

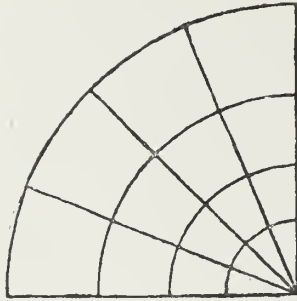


No. 185. — Squares distorted into Rectangles, with the Sides of the Rectangles parallel to the Border.



No. 186. — Squares distorted into Rhombuses, and placed diagonally with relation to the Border.

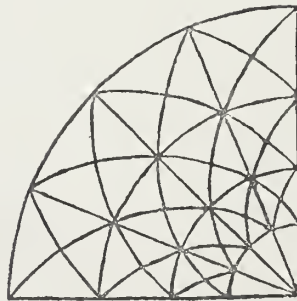
When the spaces to be decorated are circular or annular in shape, instead of being rectangular, the setting-out lines will have to be altered accordingly, one series being made concentric circles and the other straight radial lines converging towards the centre.



No. 187.—Setting-out Diagram for Annular Spaces divided into Segments, so as to correspond to Squares placed parallel to the Margin, as in No. 179.

This case corresponds to squares placed parallel to the margin, when the space to be decorated is rectangular.

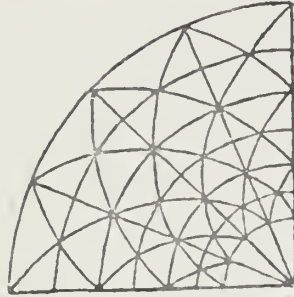
The setting-out diagram for circular or annular spaces, corresponding to squares placed diagonally with regard to the margin, when the space is rectangular, is found by joining the opposite corners of the segments of the rings in the preceding diagram thus—



No. 188.—Setting-out Diagram for Annular Spaces with Segments sub-divided, so as to correspond to Squares placed diagonally with regard to the Margin, as in No. 180.

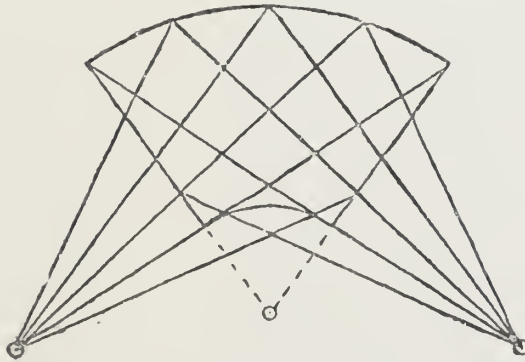
The setting-out diagram for circular or annular spaces, corresponding to squares placed diagonally with regard to the margin and divided into two triangles by vertical lines, when the space is rectangular, is derived

from the preceding by drawing concentric circles through the points of intersection of the diagonal lines thus—



No. 189.—Setting-out Diagram for Annular Spaces with Segments sub-divided, so as to correspond to No. 182.

The method used for obtaining the setting-out diagram for an approximately annular space on the stone at Hilton of Cadboll appears to have been by making the diagonal lines converge towards two points symmetrically situated on each side of the centre, thus—



No. 190.—Setting-out Diagram for Fan-shaped Space, divided as in No. 180.

THE PRINCIPLE OF SYMMETRY.

The principle of symmetry will be found to underlie all ornamental design produced by the repetition of the same figure over and over again.

Every geometrical shape has what is called its symmetrical opposite, and the number of ways in which any figure can be combined with itself and its symmetrical opposite depends on the properties which will now be explained.

In the geometry of plane figures two kinds of symmetry are recognised, viz., axial and central symmetry,¹ the former having reference to an axis in the plane of the paper, and the latter with reference to a point which is the intersection of an axis at right angles to the plane of the paper with that plane.

A figure is said to have axial symmetry if, when turned round the axis of symmetry through an angle of 180° , it remains unchanged. This may be done practically by drawing the figure on a piece of tracing paper and reversing the sheet, placing it face downwards so that the figure can be seen through the transparent paper from the back. The same effect may be obtained by drawing the figure on a piece of paper and holding it in front of a looking-glass.

A figure is said to have central symmetry if, when turned round the centre of symmetry through an angle of 180° , it remains unchanged. This may be done practically by drawing the figure on a piece of paper and turning it upside down, but keeping it the whole time in one plane with the face upwards.

A figure may have both axial and central symmetry, or it may be altogether unsymmetrical.

It may help to realise the foregoing if the symmetry of the capital letters of the alphabet be analysed. It will be found that

A H I M O T U V W X Y

are symmetrical with regard to a vertical axis passing through the middle of each letter, and if turned over upon themselves sideways, or reflected in a looking-glass, remain unchanged.

B C D E H I K O

are symmetrical with regard to a horizontal axis passing through the middle of each letter; and if turned over upon themselves upwards or downwards, instead of sideways, as in the previous case, remain unchanged.

¹ See Olaus Henrici's *Elementary Geometry* (in the London Science Class Books Series), p. 88.

H I N O S X Z

are symmetrical with regard to a centre in the middle of each letter, and when turned upside down in the plane of the paper remain unchanged.

H I O X

possess both axial and central symmetry.

F G J L P Q R

are quite unsymmetrical with regard either to an axis passing through the middle of each letter or a centre in the middle of each letter.

All figures, which have central symmetry only, possess the property of being right or left handed, for when the figure is turned over upon itself all lines which faced towards the right, and curves which had a right-handed twist, are reversed so as to become left handed. Thus—

N	becomes	И
S	„	Ɔ
Z	„	Σ

In Celtic ornament, since the designs are always founded on square setting-out lines, the figures which are repeated to form the patterns are arranged in parallel rows in two directions at right angles to each other, and therefore the number of different patterns that any particular figure is capable of producing depends on how many changes result from placing it so as to face upwards or downwards, right or left; or from making the figure right or left handed. Let us suppose that the pattern is to be formed of the letters of the alphabet by the aid of stencil-plates. The first set of changes is effected by turning the stencil-plate round each time through a right angle in one plane; and the second by turning it over on itself.

An unsymmetrical figure can be varied in eight different ways; it can be placed in four positions, facing right, left, up, or down; and in each of these positions it can be made right or left handed. Take the letter F for example. The first four changes are made with the stencil-plate face upwards by turning it round through successive right angles in one

plane; and the second four in the same way but with the stencil-plate back upwards—



If a figure has central symmetry only, it can be varied in four different ways, for it can be placed in two positions, facing upwards or sideways and in each of these positions it may be made right or left handed. Take the letter N for example. The first two changes are made with the stencil-plate face upwards by turning it through a right angle; and the second two in the same way but with the stencil-plate back upwards.



Turning the stencil-plate through two or three right angles would not produce any new changes.

If the figure has axial symmetry only, it can be varied in four different ways, for it can be placed facing to the right, left, up, or down; but if made right or left handed in these positions no new changes would be produced. Take the letter A for example. The four changes are made with the stencil-plate face upwards by turning it round successively through three right angles—



If a figure has both axial and central symmetry, it can be varied in two ways only, for it can be placed in two positions, facing upwards or sideways, but it cannot be made right or left handed.

Take the letter H for example. The two changes are produced with the stencil-plate face upwards by turning it round through a right angle.

H

I

No further changes would result either from turning the stencil-plate through two or three right angles in one plane or by reversing it back upwards.

THEORY OF PERMUTATIONS AND COMBINATIONS.

The number of ways in which any given number of elementary geometrical forms can be combined so as to produce a pattern, is capable of calculation by the algebraical theory of permutations and combinations. Take, for example, a border pattern consisting of a single row of elementary forms. If they are all the same they can be represented algebraically, thus—

a a a a a a a

If there are two different ones they can be arranged either

ab ab ab ab

or

ba ba ba ba

or

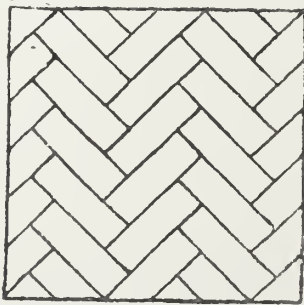
ba ab ba ab

and so on.

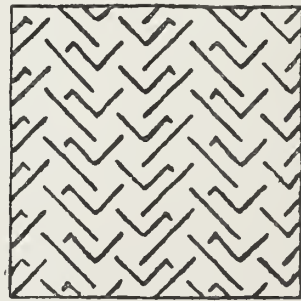
Then, if the surface to be covered is larger, two or more of the rows thus obtained can be combined in the same way as the elementary forms were in the first instance.

INTERLACED-WORK.

The term interlaced-work is used to include all patterns formed of narrow bands, or cords, following definite paths and overlapping each other at regular intervals. The paths followed by the bands may be either straight or curved. Any geometrical pattern in which a surface is entirely covered with a reticulation of lines forming closed figures, may be converted into interlaced-work by substituting bands for the lines and causing them to lap over and under each other, provided only that the lines cross, or, in other words, provided that the number of lines meeting in each point is even. If an odd number of lines meet in a point after every opposite pair of lines has been made into a single continuous band, there will still be one line left over which goes nowhere. The following is an example of a reticulated pattern which is incapable of being directly transformed into interlaced-work for the reason just stated, viz., that none of the lines cross.



No. 191.—Reticulated Pattern with Lines that Meet, but do not Cross.

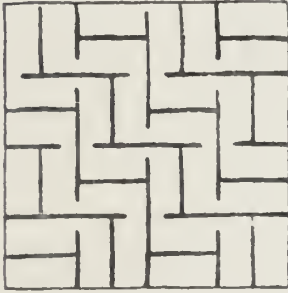


No. 192.—Interlaced Pattern, derived from No. 191 by producing the Ends of the Lines.

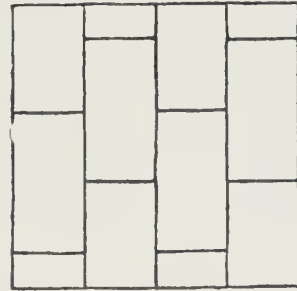
It may be done indirectly, however, by the simple artifice of producing the lines which do not cut each other and joining the ends, thus—

If a reticulated pattern, where some of the lines cross and others do not, be converted into interlaced-work by making the lines into bands, it

will be found to consist, not as in the previous cases of two independent sets of bands crossing each other, but of two net-like structures interwoven, thus—

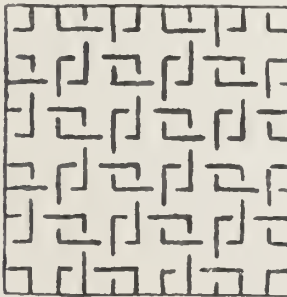


No. 193.—Interlaced Pattern composed of two Reticulated Patterns like No. 194 interwoven.

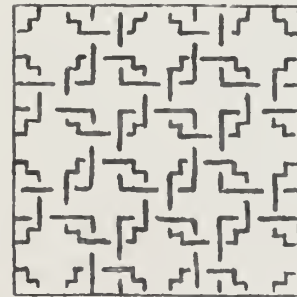


No. 194.—Reticulated Pattern on which No. 193 is based.

A third kind of interlaced-work is composed entirely of rings, like chain-mail. It can be derived from any reticulated line pattern by setting the figures apart and combining them with any similar or other series of figures set apart in the same way, by placing one series on the top of the other and making the lines into bands, thus—



No. 195.—Chain-mail Interlaced-work composed of Square Rings.



No. 196.—Chain-mail Interlaced-work composed of Two Sets of Rings of Different Shape.

In Saracenic art the interlaced-work is generally composed of straight bands with sharp angular bends where the direction of the band changes, and the patterns are obviously derived from reticulations of straight lines

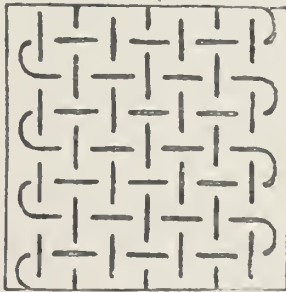
by substituting overlapping bands for the lines. The revival of the science of mathematics by early Arabic scholars manifests itself very clearly in the ornament of the Saracenic school, which is essentially the product of a people well skilled in the constructions of practical geometry. The Saracenic designer was, indeed, always too much the slave of the geometrical skeleton on which the ornament was built up, and the bewildering effect produced by the incessant crossing and re-crossing of straight lines at all sorts of angles would at times be almost unendurable were it not for the brilliant colouring and other redeeming characteristics. The Celtic designer, on the contrary, never used more geometry than he could possibly help, nor did he ever allow the mathematician's ideally straight line to make its appearance if by any means it could be avoided. In Celtic interlaced-work the bands never pursue a straight course for any great distance, and even when the general direction is straight, slight undulations are introduced between the points where the bands cross to give more reality to the overlappings.

And now comes the vexed question of the origin of Celtic interlaced-work. If it was not evolved from geometrical surface ornament composed of straight lines, as in Saracenic art, how, then, did it suggest itself in the first place, and how afterwards did it become the leading "motif" of the style? Mr Lewis F. Day, whose opinion on the subject of decorative art is entitled to as much weight as anyone's, says—"It is more than probable that some mechanical necessity gave rise to all geometric pattern; certainly it is impossible to plait, net, knit, weave, or otherwise mechanically make without producing pattern."¹ Any plaited fabric might, therefore, have suggested the idea of interlaced-work to the Celtic designer, but the fact remains that the plait was not used by him for purposes of decoration until after the introduction of Christianity into this country, indicating that it must have come in with the new religion from some external source; for if it had not done so there is no reason why it should not be found on the metal-work of the Pagan period in combination with the divergent spiral. The earliest copies of the gospels brought into

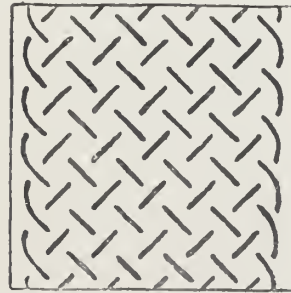
¹ *The Anatomy of Pattern*, p. 1. Dr Colley March has given the name of "Skuomorph" to patterns suggested by mechanical processes (see *Trans. of Lancashire and Cheshire Archæol. Soc.*, vol. for 1889).

Great Britain by the first Christian missionaries were no doubt of eastern origin, and similar to the Greek Codices of the 4th and 5th centuries, some of which are still in existence. One of these, in the British Museum, is ornamented in places with small pieces of plait-work, and in all probability it was from such a source that the Celtic designer first got his idea of interlaced patterns. The Nestorian, Coptic, and Abyssinian Churches have continued the practice of decorating their ecclesiastical MSS. and buildings with interlaced-work from the earliest times down to the present day.¹ Having once got the idea of using the plait as an ornament, the Celtic artist was not slow to develop out of it all sorts of beautiful modifications by a process which will now be explained.

A plait may be derived from a reticulated straight-line pattern consisting entirely of squares by transforming the lines into bands passing over and under each other alternately. The structure of a woven and of a plaited fabric are the same, except that in one case the squares are parallel to the margin and in the other the squares are placed diagonally with regard to it; and the joining up of the threads, or bands, at the edge is different, thus—



No. 197.—Woven Fabric.



No. 198.—Plaited Fabric.

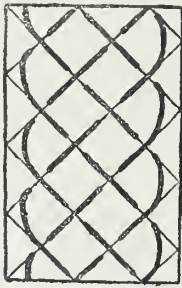
A plait is drawn practically in the following way:—First, the surface is covered with setting-out squares placed diagonally with regard to the margin; then the bands are drawn over the lines, a break being left at every second square for the other series of bands to cross over; and lastly,

¹ E. L. Cutt's *Christians under the Crescent in Asia*; Butler's *Coptic Churches of Egypt*.

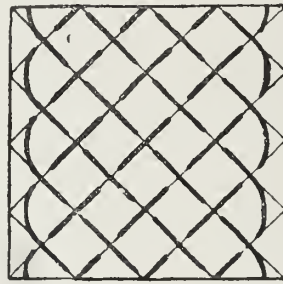
all the bands along each of the two edges instead of being allowed to run on in the same direction are broken off and bent round at a right angle so as to join the other series of bands. If the path of any particular band be traced it will be found to pursue a zigzag course, running diagonally right across the whole width of the plait first one way and then the other.

In the diagrams the plaits are always placed vertically. The number of vertical rows of setting-out squares depends on the number of bands, or cords, in the plait; the number of rows being always half the number of cords.

As illustrations of the method of setting out a plait, examples of five and eight cords respectively are here given—



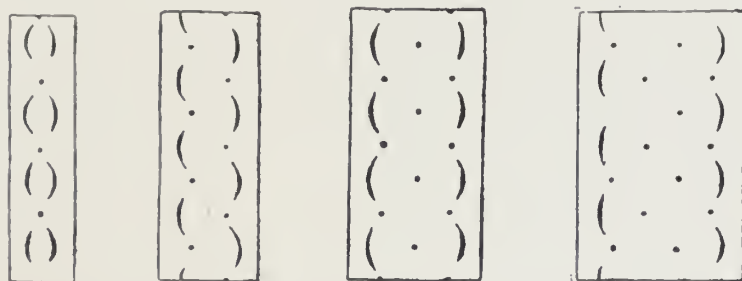
No. 199.—Method of Setting Out a Five-cord Plait.



No. 200.—Method of Setting Out an Eight-cord Plait.

The easiest way to count the number of cords in a plait is to draw a horizontal line through one of the sets of points where the cords cross. If the number of cords in the plait is uneven, such a line will cut the outside cord in the middle of the bend either on one side or the other. If the number is even such a line will either cut the outside cords where they cross or in the middle of the bend. To ascertain the number of cords, count the number of points where the bands cross and double it, adding one if the line of section passes through the middle of the bend of the outside cord. In looking at the two edges of a plait with an even number of cords, it will be seen that the bends and crossing points are always opposite each other; but if the number of cords is uneven, the middle of the bend on one side is opposite to a crossing point on the other. The relative positions of

the crossing points and bends for plaits of different numbers of cords is shown below—



No. 201. —Diagram showing Relative Positions of Bends and Crossing Points of Plaits of Two, Three, Four, and Five Cords respectively.

In the following investigations a twist is looked upon as a two-cord plait.

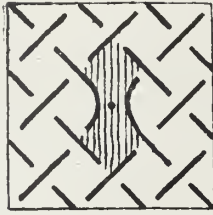
All the patterns used in Celtic interlaced ornament appear to have been developed out of plait-work by the introduction of breaks in the plait at regular intervals. What is here termed a break is produced thus. Take any crossing point in the plait and imagine the two cords which intersect each to be cut through and disconnected. There will then be four loose ends A, B, C, D, which can be joined up two and two.



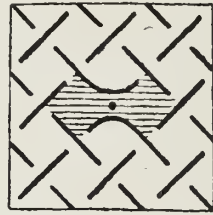
No. 202. —Diagram showing Method of making a Break in a Plait.

Originally AB and CD were joined together and crossed over, but now the crossing may be obliterated and the ends AC and DB be joined, or AD and CB. The result is that a break is made in the plait by causing two of the cords to bend at right angles to their former direction instead of going straight forwards. A change is in this way produced in the path followed by the cord, and the shape of the spaces between the cords is altered by throwing two adjoining squares into one. When the loose ends C and B are joined to the loose ends A and D lying above them, the break is termed a vertical one; and when the loose ends A and C are joined to D and B lying

to the right of them, the break is called a horizontal one. All other kinds of breaks that can be made in a plait are merely combinations of these two.



No. 203.—Vertical Break.

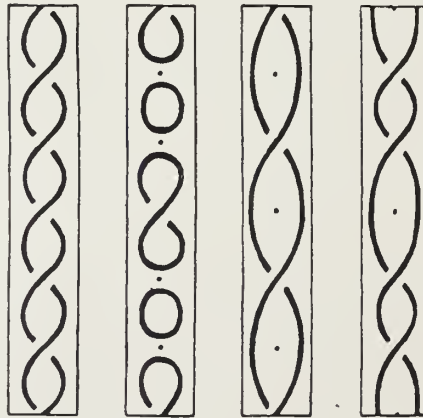


No. 204.—Horizontal Break.

On all the diagrams the positions occupied by crossing points which have been removed are marked with black dots.

We will now proceed to investigate the result of making more than one break in plaits of different numbers of cords, beginning with the twist or two-cord plait.

A two-cord plait, or twist (No. 205), has only one vertical row of crossing points



No. 205.

No. 206.

No. 207.

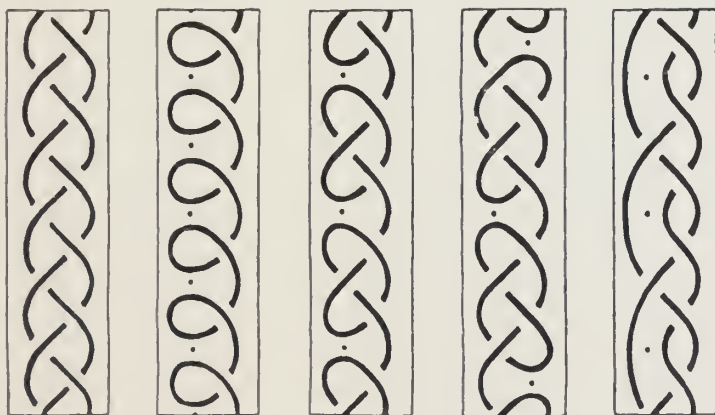
No. 208.

The result of making a horizontal break in a two-cord plait is to cut off one portion of it entirely from the other. If the breaks are made at every crossing point a row of oval, or circular, rings is produced (No. 206); and if the breaks are made at every other crossing point a row of figure-of-eight rings is produced (No. 206).

The result of making a vertical break in a two-cord plait is to increase

the distance between the crossing points and the length of the undulations of the cords. If the breaks are made at every crossing point the plait will be transformed into two vertical cords running parallel to each other, but not crossing at all; if the breaks are made at every other crossing point (No. 207) the lengths of the undulations are doubled (*i.e.*, the cords are less tightly twisted together); and if the breaks are made at every second¹ crossing point a series of long and short undulations is obtained (No. 208).

A three-cord plait (No. 209) has two vertical rows of crossing points, in one or both of which breaks may be made. If horizontal breaks are made at every crossing point in the first row only, or in the second row



No. 209.

No. 210.

No. 211.

No. 212.

No. 213.

only, the plait will be reduced to a single band forming a series of loops on one side or the other (No. 210).

If horizontal breaks are made at every other crossing point in one row only, one side of the plait remains unaltered, but a series of indentations is produced in the other side (No. 211). Between each indentation the cord forms itself into what, for the sake of convenience, may be called a knot, and this knot is repeated over and over again throughout the pattern. The

¹ When a break is made at every crossing point there are no points left between; when a break is made at every other point there is one point left between; when a break is made at every second point there are two points left between; and when a break is made at every *n*th point there are *n* breaks left between.

particular knot thus obtained is the one used as the badge of the Stafford family, and is capable of being tied practically with a piece of string; but this is not always the case, for in many instances, if the so-called knots found in Celtic ornament were to be tied in string, when the ends were pulled tight the whole thing would collapse. When a knot is spoken of hereafter in connection with interlaced-work, it must be understood to mean merely an arrangement of bands following definite paths, and crossing over and under each other at regular intervals, and not necessarily one which a sailor or mechanic could make use of for practical purposes.

If horizontal breaks are made in both rows of crossing points of a three-cord plait at every fourth point, so that each break on one side is half way between two breaks on the other side, the result is to produce a series of indentations on both sides of the plait (No. 212). Between each indentation the cord forms itself into a knot, every other knot being the same and the intermediate ones its symmetrical opposite.¹

If vertical breaks are made in a three-cord plait at every other crossing point in one of the two rows, one side of the plait will remain unaltered, but the lengths of the undulations of the outside cord on the other will be doubled (No. 213). The shapes of the spaces enclosed by the cords in the interior of the plait will also be changed.



No. 214.



No. 215.

Other combinations of horizontal and vertical breaks, besides those already mentioned, may be made, but they only result in producing isolated rings and other patterns unsuitable for decorative purposes.

The characteristics by which one knot can be distinguished from another are as follows: (1) The number of cords of which the knot is composed; (2) the number and shape of the spaces enclosed by the cords;

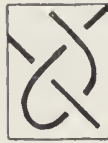
¹ This knot has central symmetry with regard to its middle point, and its symmetrical opposite is obtained by drawing it on tracing paper and turning it over face downwards.

(3) the number of right angles through which the cords are bent where the breaks in the plait occur; and (4) the number of cords that pass through the loops formed by bending the cords.

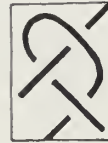
For instance, each of the two knots that have just been derived from a three-cord plait are composed of a single cord; the first knot (No. 214) has three spaces enclosed by the cords, and the second has four (No. 215); in both cases the cord is bent through three right angles to form the loop and a single cord passes through each loop, the only difference being in the position in which the loops are placed, thus—



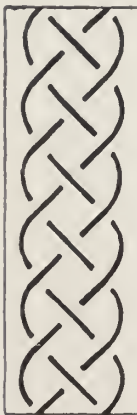
No. 216.



No. 217.



A four-cord plait (No. 218) has three vertical rows of crossing points, and variations in the pattern may be produced, as in the previous cases, by (1) making the breaks horizontal or vertical; (2) by altering the distance between the breaks; and (3) by placing the breaks in one, two, or all of the vertical rows of crossing points.



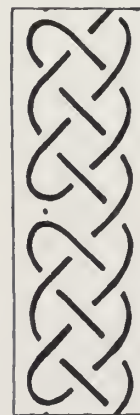
No. 218.



No. 219.



No. 220.



No. 221.

The simplest patterns are those in which all the breaks are of the same kind (*i.e.*, all horizontal, or all vertical) and in one row only; then

those with breaks of the same kind in two rows; next those of the same kind in three rows; and lastly horizontal and vertical breaks occurring together and in various rows. The more complicated knots were probably arrived at by a gradual process from the simpler ones, by adding breaks to those already made in the plait; or in other words, by making breaks in the derived pattern in the same way that breaks were made in the plait in order to produce the intermediate pattern.

Different patterns can be derived from a four-cord plait by the method just explained in the following ways:—

By making horizontal breaks in one of the outside rows at every crossing point (No. 219).

By making horizontal breaks in one of the outside rows at every other crossing point (No. 220).

By making horizontal breaks in one of the outside rows at every second crossing point (No. 221).

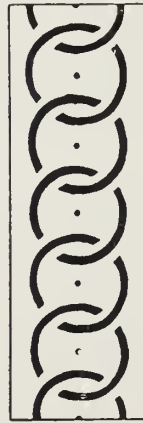
By making horizontal breaks in both of the outside rows at every other



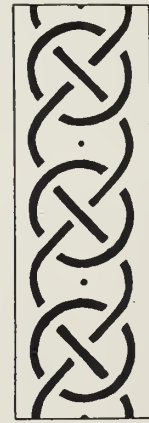
No. 222.



No. 223.



No. 224.



No. 225.

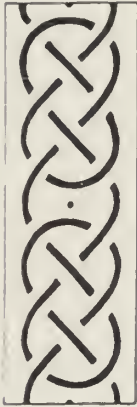
crossing point, so that each break on one side may lie half way between two breaks on the other side (No. 222).

By making horizontal breaks in both of the outside rows at every fifth crossing point, so that each break on one side may lie half way between two breaks on the other side (No. 223).

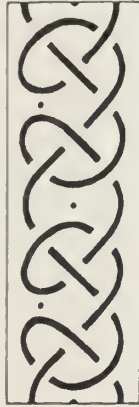
By making horizontal breaks in the centre row only at every crossing point (No. 224).

By making horizontal breaks in the centre row only at every other crossing point (No. 225).

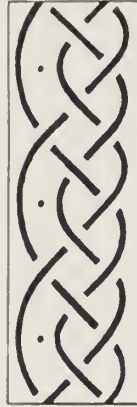
By making horizontal breaks in the centre row only at every second crossing point (No. 226).



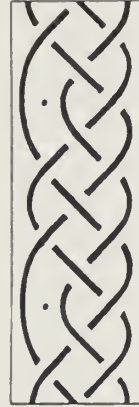
No. 226.



No. 227.



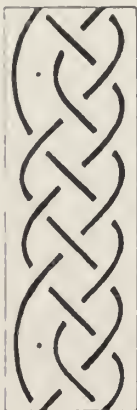
No. 228.



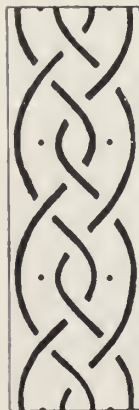
No. 229.

By making horizontal breaks in the centre and one of the outer rows at every second crossing point, so that each break in one row may be half way between two breaks in the other row (No. 227).

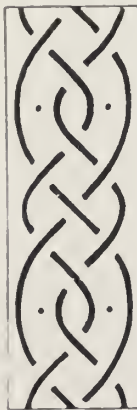
By making vertical breaks in one of the outside rows at every other crossing point (No. 228).



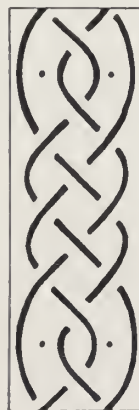
No. 230.



No. 231.



No. 232.



No. 233.

By making vertical breaks in one of the outside rows at every second crossing point (No. 229).

By making vertical breaks in one of the outside rows at every third crossing point (No. 230).

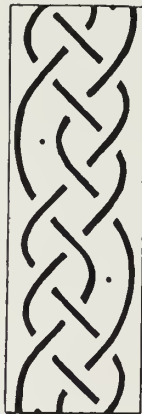
By making vertical breaks in the same way as in Nos. 228 to 230, but in both the outside rows instead of only in one (Nos. 231 to 236).



No. 234.



No. 235.



No. 236.



No. 237.

By making vertical breaks in the centre row only at varying intervals (Nos. 237 to 239).

By making additional breaks in the centre row of Nos. 232 and 233 (Nos. 240 and 241).



No. 238.



No. 239.



No. 240.



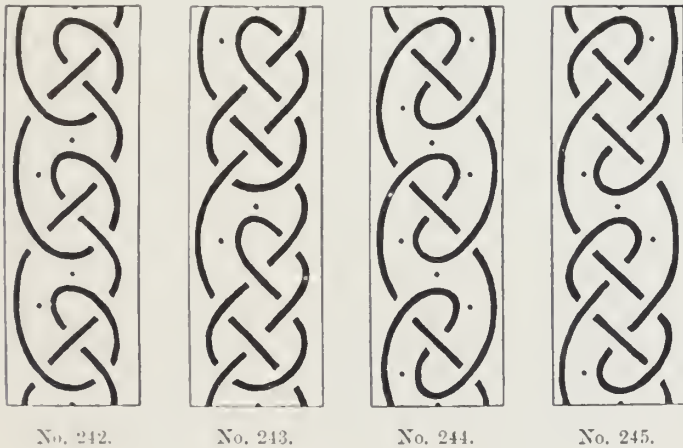
No. 241.

By making vertical breaks in one of the outside rows, and horizontal breaks in the centre row, at every other crossing point, so that the spaces

formed by each pair of horizontal and vertical breaks open one into another and are L-shaped (No. 242). This pattern may also be obtained by introducing additional vertical breaks in one of the outer rows of No. 225; or by introducing additional horizontal breaks in the centre row of No. 228.¹

By making breaks as in the preceding, but at greater intervals (No. 243). This pattern may also be obtained by adding vertical breaks in one of the outside rows of No. 226, or horizontal breaks in the centre row of No. 229.

By making vertical breaks in the two outside rows and horizontal breaks in the centre row at every other crossing point, so that the spaces formed



by each set of three breaks open one into the other and are L-shaped (No. 244). This pattern may also be obtained from No. 225 by adding vertical breaks in the two outside rows; or from No. 234 by adding horizontal breaks in the centre row.

By making breaks as in the preceding, but at greater intervals (No. 245). This pattern may also be obtained from No. 226 by adding vertical breaks in the two outside rows; or from No. 235 by adding horizontal breaks in the centre row.

¹ The connection between the various patterns may be most easily made out by drawing the less complicated ones on tracing paper and then placing them over the more complicated ones, when the position of the additional breaks will be at once apparent.

We are now in a position to understand the effect produced by making different kinds of breaks in different parts of the plait.

If horizontal breaks only are made in one or both of the outside vertical rows of crossing points, a series of indentations is produced along one or both edges of the plait, which may now be termed a "plait with an indented border" (Nos. 211, 212, and 220 to 223). When the breaks are made at every crossing point, the cord forms loops between each indentation, and the pattern may be termed "a plait with a looped border" (Nos. 210 and 219).

If vertical breaks only are made in one or both of the outside rows, the length of the undulations of the outside cord, or cords, is increased, according to the interval between the breaks, and the pattern may be called a "plait with an open scalloped border" (Nos. 213 and 228 to 236).

If horizontal breaks only are made in the middle row of the plait, a chain of circular rings (No. 224), a twist combined with rings (No. 225), or figure-of-eight knots (No. 226) are produced, according to the intervals between the breaks.



No. 246.



No. 247.



No. 248.



No. 246a.



No. 247a.

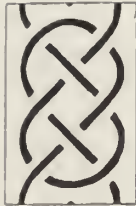


No. 248a.

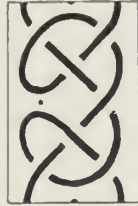
If vertical breaks only are made in any of the rows, the plait is transformed into combinations of smaller plaits, twists, and undulating cords (Nos. 231 to 241).

If horizontal breaks only are made in one of the outside rows and in the centre row, the knot which is repeated in pattern No. 227 is obtained.

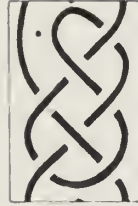
If L- and Z-shaped spaces are made by combining horizontal and vertical breaks in different rows, the knots which are repeated in patterns Nos. 242 to 245 are obtained.



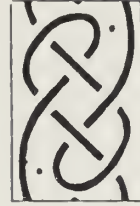
No. 249.



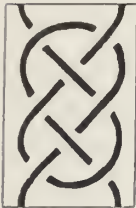
No. 250.



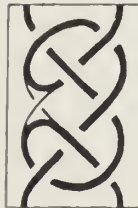
No. 251.



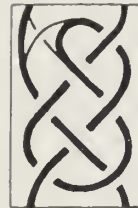
No. 252.



No. 249a.



No. 250a.



No. 251a.



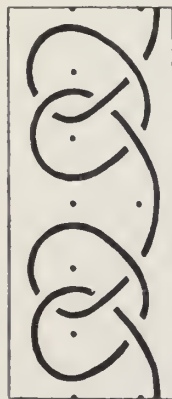
No. 252a.

The connection between the different knots is shown on Nos. 246 to 252a.

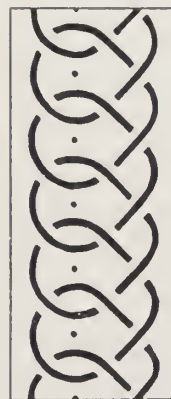
The following patterns are derived from a five-cord plait on the principle already explained (Nos. 253 to 261).



No. 253.



No. 254.



No. 255.

It will be seen that there is a family likeness between the patterns, formed by making the breaks in the same way in plaits composed of

varying number of cords, and for each pattern derived from, say, a three-cord or a four-cord plait there will be a corresponding one derived from a five, six, seven, eight, &c., cord plait.



No. 256.



No. 257.



No. 258.



No. 259.



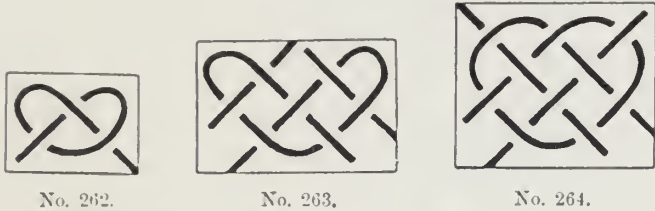
No. 260.



No. 261.

The knot derived from a plait of a large number of cords has generally one cord which takes the form of the corresponding knot derived from a plait of a smaller number of cords, but it is interwoven with additional cords passing through the loops of the knot. Thus, corresponding to knot No.

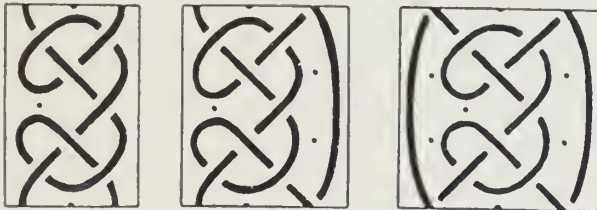
262, which is derived from a three-cord plait, we have knot No. 263, which is derived from a plait of four cords. The extra cords may also pass through the loops of the same knot in another way, as in No. 264.



No. 262.

No. 263.

No. 264.



No. 265.

(Derived from a four-cord plait.)

No. 266.

(Derived from a five-cord plait.)

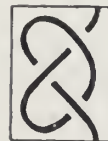
No. 267.

(Derived from a six-cord plait.)



No. 268.

(Derived from a six-cord plait.)



No. 269.

(Derived from a three-cord plait.)

Again, in other instances the same knot that was derived from a plait of a small number of cords may be derived also from a plait of a larger number of cords; but in the latter case the knot will have extra cords passing on one or both sides of it, as in Nos. 265, 266, and 267.

Or the same knot that was derived from a plait of a small number of cords may be derived from a plait of a larger number of cords; but in the latter case the knot is formed of two cords running parallel to each other instead of a single cord, as in Nos. 268 and 269.

Or the same knot that was derived from a plait of a small number of cords may be derived from a plait of a larger number of cords; but in the



No. 270.
(Derived from
a four-cord plait.)



No. 271.
(Derived from
a six-cord plait.)



No. 272.
(Derived from
a four-cord plait.)



No. 273.
(Derived from
an eight-cord plait.)

latter case the knot will occupy a different position, as in Nos. 270 and 271.

For each pattern derived from a plait of any given number of cords there is a corresponding double pattern, in which the elementary knots are repeated in two vertical rows instead of one, derived from a plait of twice the number of cords, as in Nos. 272 and 273.

It will be noticed that the rectangular indentations in the edge of the first pattern (No. 272) are transformed into cruciform spaces in the second (No. 273). A single horizontal break in the *edge* of a plait corresponds to a T-shaped break in the *middle* of a plait, because the edge of the plait was formed in the first instance by making a row of vertical breaks.

The annexed patterns (Nos. 274 and 275) can accordingly either be



No. 274.
(Derived from
a six-cord plait.)



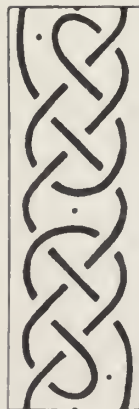
No. 275.
(Derived from
an eight-cord plait.)

derived direct from plaits of six and eight cords respectively, or may be obtained by doubling patterns derived from three and four cords respectively.

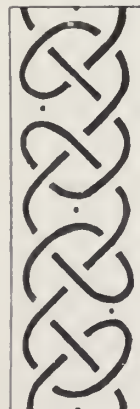
If any given arrangement of breaks in a plait of any particular number



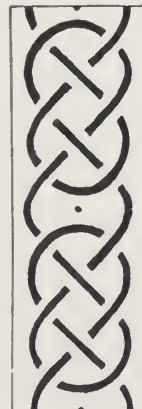
No. 276.



No. 277.



No. 278.



No. 279.

of cords be reversed, either by rotating the system of breaks round an axis in the plane of the paper, or round one at right angles to it (as explained

when treating of symmetry), the right- or left-handedness of the knots will be altered, or their positions, as regards the direction in which they face, or both, as follows :—

A right-handed knot may be converted into a left-handed one by turning it through two right angles round an axis in the plane of the paper (No. 276).

A knot facing upwards may be converted into a knot facing downwards by turning it through two right angles round an axis perpendicular to the plane of the paper (No. 277).

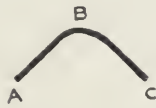
A knot facing to the right may be converted into one facing to the left by treating it as in either of the two preceding cases.

A knot may remain unchanged when turned round either axis (No. 279).

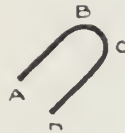
Having explained how knot-work can be developed out of plait-work we are now in a position to generalise on the subject.

The term interlaced-work is used to include plait-work and all patterns derived from it. Broken plait-work means any plait in which breaks have been made. If the breaks are not made upon a definite plan, but scattered over the plait at random, the broken plait-work is said to be irregular, and, although used for purposes of decoration, it can hardly be called a pattern, for the very essence of a pattern is that certain geometrical forms shall be repeated rhythmically at regular intervals. When the breaks recur at fixed places in the plait according to some definite law a pattern is produced, which may be termed regular broken plait-work. Here the effect of the pattern is due to the shape and position of the blank spaces formed by the breaks, as contrasted with the rest of the surface, which is covered with unbroken plait-work. If the breaks are sufficiently numerous and close enough together the unbroken portion of the plait disappears, and attention is drawn to the shapes of the bends of the cords instead of to the arrangement and forms of the spaces between them. The plait then ceases to predominate and groups of similarly situated breaks are repeated at frequent intervals, in which case the term knot-work may be applied to the pattern. The term knot is perhaps a little misleading, as suggesting to the mind the idea of a knot that is capable of being tied practically, instead of merely an arbitrary arrangement of cords following the lines of a geometrical diagram. The so-called knots used in Celtic ornament

are composed of cords forming bends and loops with other cords passing over and under them. The shapes of the knots depend on the number of bends each cord makes through a right angle and the number of other cords it crosses between each bend.



No. 280.

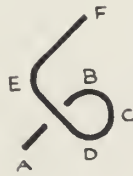


No. 281.

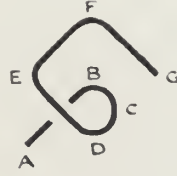


No. 282.

A cord may be bent either through one right angle (No. 280) or through two right angles (No. 281) without crossing over itself, but if it is bent round through three right angles it must cross over itself and form a loop (No. 282). The bending process may be carried still further through four



No. 283.



No. 284.

(No. 283), five (No. 284), or more right angles. The loops may be of two kinds, either symmetrical (No. 285) or unsymmetrical (No. 286), according as the distance between the bends is equal or unequal. In all the knots used in Celtic interlaced-work, these bends and loops will be recognised,



No. 285.

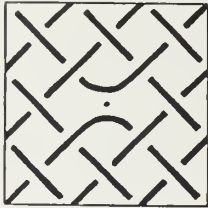


No. 286.

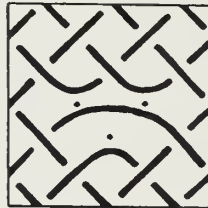
arranged singly or in pairs, and with one or more cords passing across them. It is the arrangement of the bends and loops and the number of convolutions made by the cord after crossing over itself that gives each knot its peculiar character.

The bends and loops are combined so as to form knots by placing them in pairs in different ways, and the number of separate knots that can be obtained from any one bend or loop depends on its properties as regards symmetry.

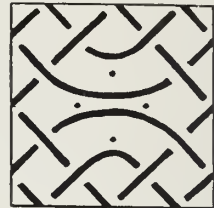
The connection which exists between the breaks in the plait and the bends of the cord will be understood from the following examples:—



No. 287.



No. 288.



No. 289.

The cord may be bent through one right angle and joined on to the next (No. 287). This is done by making a single break in the plait. If one cord is bent at right angles it follows, as a matter of necessity, that the cord opposite to it must also be bent at right angles.

The cord may be bent through one right angle and joined on to the next but one (No. 288). This is done by making two breaks in one straight line next to each other, which involves the necessity of making a third break half-way between the two former in the row of crossing points below.

If a break is made both above and below the first two breaks (No. 289) a pattern similar to No. 287 is obtained but formed with a double cord instead of a single one.

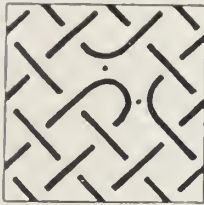
The cord may be bent through two right angles in the same direction and joined on to the next (No. 290). This is done by making two breaks of different kinds¹ next to each other, the space formed by the break being L-shaped. The cord, after being bent, will continue to run parallel to itself but in an opposite direction.

The cord may be joined on to the next but one (No. 291), in which case it will cross over another cord between the two bends.

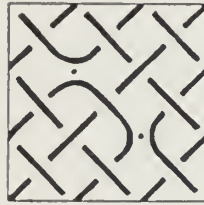
¹ *i.e.*, one horizontal and the other vertical.

The cord may be round through two right angles, but in opposite directions, and joined on to the next (No. 292). This is done by making two breaks of the same kind next to each other. The cord, after being bent, will continue to run parallel to itself in the same direction. The curve made by the cord is S-shaped.

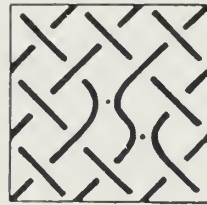
The cord may be joined on to the next but one (No. 293), in which case it will cross over another cord between the two bends.



No. 290.



No. 291.

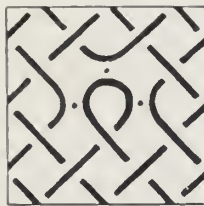


No. 292.

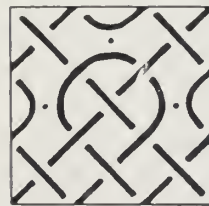
The cord may be bent through three right angles in the same direction and joined on to the next, so as to form a symmetrical circular loop (No. 294). This is done by making two breaks of the same kind and one of a different kind next to each other, the space being Π -shaped. The effect of bending the cord through three right angles on its subsequent direction is the same as if it had only been bent through one right angle.



No. 293.



No. 294.



No. 295.

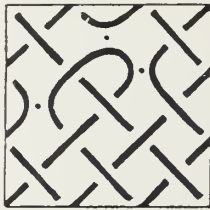
The cord may be joined on to the next but one, so as to pass over a cord between each bend (No. 295). This produces a symmetrical loop with two cords passing through it and crossing in the middle.

The cord may be bent round through three right angles in the same direction, so as to form an unsymmetrical oval loop with another cord passing through it (No. 296).

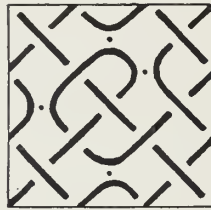
The cord may be bent round through four right angles in the same direction (No. 297), so as to form an unsymmetrical loop with another cord passing through it; the difference between this and No. 296 being that the cord which forms the loop makes a bend through a right angle afterwards and crosses over the other cord that passes through the loop.

The cord may be bent round in the same direction through five right angles (No. 298), so as to form an unsymmetrical loop with another cord passing through it; the first cord continuing to bend spirally round the loop.

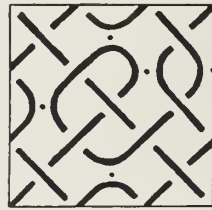
The patterns used in Celtic interlaced-work are formed by the repetition of bends and loops at regular intervals. This may be done in four different ways: (1) The *same* bend or loop may be repeated throughout the pattern in the same angular position; (2) the *same* bend



No. 296.



No. 297.



No. 298.

or loop may be combined with itself, but in different angular positions, or with the symmetrical opposites of itself in each of these positions, in such a way as to produce what for want of a better name we are obliged to call a knot, and this knot may be repeated throughout the pattern in the same angular position, or it may be combined with the *same* knot but in different angular positions, or with the symmetrical opposites of the knot in each of these positions; (3) bends or loops of *different* kinds may be repeated at intervals throughout the pattern; and (4) bends or loops of *different* kinds may be combined so as to produce knots, which may be repeated in the same way as the knots composed entirely of the *same* bends or loops.

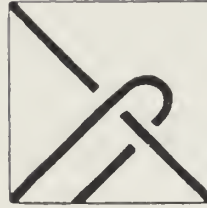
The bends are of three kinds, namely :—

(1) The V-shaped bend, where the cord is bent through one right angle (No. 299).

(2) The U-shaped bend, where the cord is bent through two right angles in the same direction (No. 300).



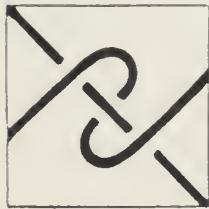
No. 299.



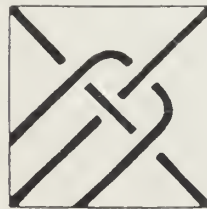
No. 300.

(3) The S-shaped bend, where both ends of the cord are bent round spirally through two or more right angles in opposite directions (No. 301).

The V-shaped bend may be used with an extra cord passing through the portion of the V between the two right-angle bends (No. 302).



No. 301.



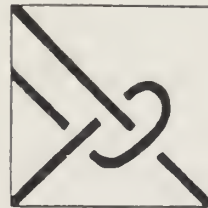
No. 302.

The loops are of two kinds, namely :—

(1) The symmetrical loop, where the cord is bent round through three right angles in the same direction, and crosses over itself after forming a circular loop (No. 303).



No. 303.



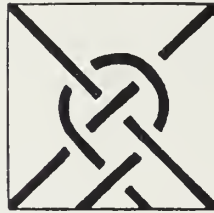
No. 304.

(2) The unsymmetrical loop, where the cord is bent through three right angles in the same direction, and crosses over itself after forming an oval lop-sided loop (No. 304).

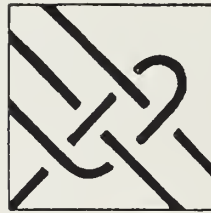
The symmetrical loop is used with or without extra cords passing

through the loop. The number of extra cords must be even, and they must cross at right angles in the centre of the loop (No. 305).

The unsymmetrical loop is always used with one or more extra cords passing through the loop, either in one direction parallel to each other (No. 306) or in two directions at right angles to each other. In the latter case the number of extra cords passing through the loop in one direction must be greater than the number passing through it in the other direction; otherwise the loop would not be unsymmetrical.



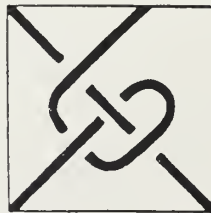
No. 305.



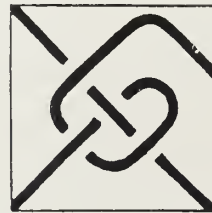
No. 306.

The cords which form the loops may be bent round spirally through one or more right angles beyond the point where the cord crosses over itself (Nos. 307 and 308).

The number of ways in which these elementary bends and loops can themselves be repeated so as to produce patterns, or be combined to form knots capable of repetition in a similar manner to produce patterns,



No. 307.



No. 308.

depends upon their properties as regards symmetry. The bends and loops just described are capable of being varied by rotating them, either round an axis in the plane of the paper or round an axis at right angles to it, in the following ways :—

If a V-shaped bend be placed within a square margin and rotated from

left to right round an axis at right angles to the plane of the paper, passing through the centre of the square, it may be made to occupy four positions successively, as indicated by the arrows.

V-shaped bend facing upwards (No. 309).

V-shaped bend facing to the right (No. 309A).

V-shaped bend facing downwards (No. 309B).

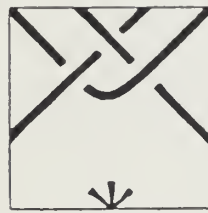
V-shaped bend facing to the left (No. 309c).



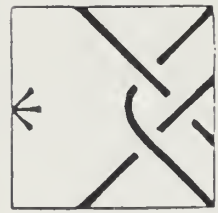
No. 309.



No. 309A.



No. 309B.



No. 309c.

No further variations can be obtained by rotating the figure round an axis in the plane of the paper (*i.e.*, by reflecting Nos. 309 to 309c in a mirror, or by drawing them on tracing-paper and looking at them from the back).



No. 310.



No. 310A.



No. 310B.



No. 310c.

An U-shaped bend treated in a similar manner is capable of four variations, as indicated by the arrows.

U-shaped bend facing upwards (No. 310).

U-shaped bend facing to the right (No. 310A).

U-shaped bend facing downwards (No. 310B).

U-shaped bend facing to the left (No. 310c.)

An S-shaped bend is capable of four variations only.

S-shaped bend, right-handed, facing upwards (No. 311).

S-shaped bend, right-handed, facing to the right (No. 311A).

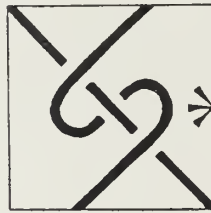
S-shaped bend, left-handed, facing upwards (No. 311B).

S-shaped bend, left-handed, facing to the right (No. 311c).

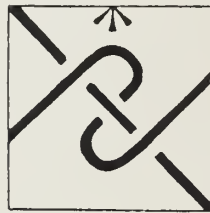
A right-handed bend is converted into a left-handed bend by reflecting it in a mirror, and the other changes are produced by rotating the figure round an axis at right angles to the plane of the paper.



No. 311.



No. 311A.



No. 311B.



No. 311c.

A symmetrical loop is capable of four variations only, produced by rotating the figure round an axis at right angles to the plane of the paper.

Symmetrical loop facing upwards (No. 312).

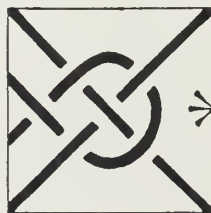
Symmetrical loop facing to the right (No. 312A).

Symmetrical loop facing downwards (No. 312B).

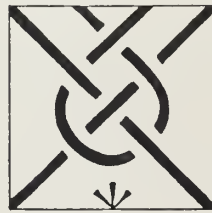
Symmetrical loop facing to the left (No. 312c).



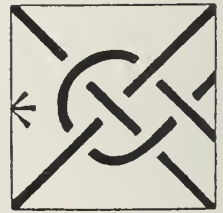
No. 312.



No. 312A.



No. 312B.



No. 312c.

An unsymmetrical loop is capable of eight variations only, of which four are derived from a right-handed loop and four from a left-handed loop, by rotating each of the figures round an axis at right angles to the plane of the paper. A left-handed loop is derived from a right-handed loop by reflection in a mirror, or by rotating the figure round an axis in the plane of the paper.

Thus we get

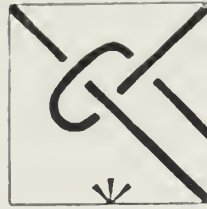
- An unsymmetrical loop, right-handed, facing upwards (No. 313).
- An unsymmetrical loop, right-handed, facing to the right (No. 313A).
- An unsymmetrical loop, right-handed, facing downwards (No. 313B).
- An unsymmetrical loop, right-handed, facing to the left (No. 313c).



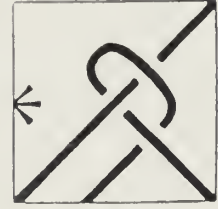
No. 313.



No. 313A.



No. 313B.

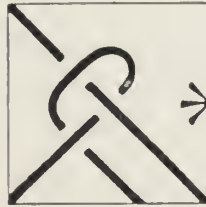


No. 313c.

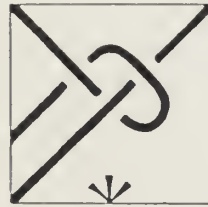
- An unsymmetrical loop, left-handed, facing upwards (No. 313D).
- An unsymmetrical loop, left-handed, facing to the right (No. 313E).
- An unsymmetrical loop, left-handed, facing downwards (No. 313F).
- An unsymmetrical loop, left-handed, facing to the left (No. 313G).



No. 313D.



No. 313E.



No. 313F.



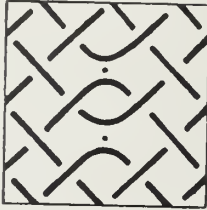
No. 313G.

Interlaced patterns are produced by the repetition of so-called knots, and these knots are in their turn formed by combining bends and loops in the following different ways :—

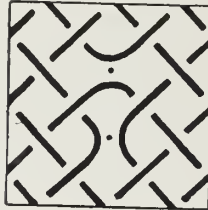
Two V-shaped bends may be combined by placing one bend facing upwards and the other facing downwards (No. 314), or by placing one bend facing upwards and the other facing to the right (No. 315).

According to the principle already explained of forming the simplest kind of break in a plait, wherever a V-shaped bend occurs there must of necessity be another V-shaped bend facing in the opposite direction.

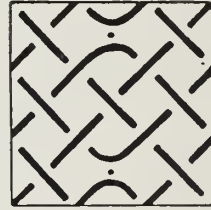
Further variations may be obtained by placing the bends further apart (No. 316), by doubling the cord (No. 317), and by joining the bent cord on to the next cord but one, so as to make the bend less acute (No. 318).



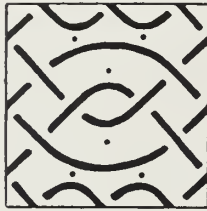
No. 314.



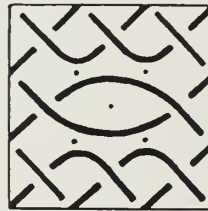
No. 315.



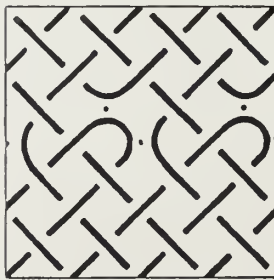
No. 316.



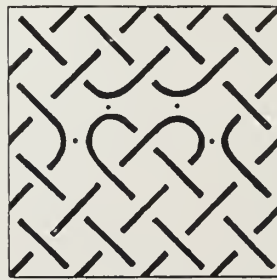
No. 317.



No. 318



No. 319.



No. 320.

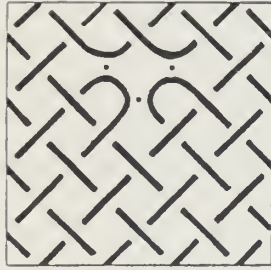
Two U-shaped bends may be combined in four different ways: (1) By placing both bends facing upwards¹ (No. 319); (2) by placing one bend facing upwards and the other facing to the left (Nos. 320 and 321); (3) by placing one bend facing upwards and the other facing to the left (No. 322); or (4) by placing one bend facing upwards and the other

¹ For different positions, see Nos. 310, 310A, 310B, 310c.

facing downwards (Nos. 323 to 325). It will be noticed that the relative angular positions of the bends are the same in Nos. 320 and 321, and in Nos. 323 to 325, the only difference being in the distances between the bends.



No. 321.



No. 322.



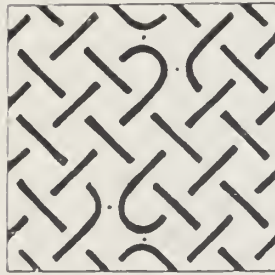
No. 323.

By adding fresh breaks in the plait to any of the foregoing combinations of bends, it is possible to transform them into combinations of loops where the cord bends through three or more right angles.

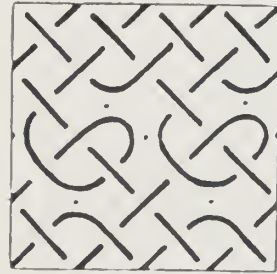
Thus, by adding a horizontal break immediately below each of the U-shaped bends in No. 319, a combination of two unsymmetrical loops



No. 324.



No. 325.



No. 326.

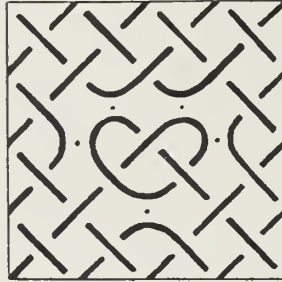
facing upwards is obtained (No. 326), the cord making a single right-angle bend after crossing over itself to form the loop. If other breaks are added above the loops, the result is a combination of two knots (No. 308) where the cord makes a bend spirally through two right angles after crossing over itself, or five right angles altogether from the beginning (No. 327).

Two new combinations may be derived from No. 320, one by adding

a horizontal break underneath and midway between the two **U**-shaped bends (No. 328), and the other by adding a vertical break in the same place (No. 329). No. 328 is the well-known Stafford knot, which may also be got by placing together two unsymmetrical loops, both facing upwards, but one right-handed (No. 313) and the other left-handed (No. 313D).



No. 327.



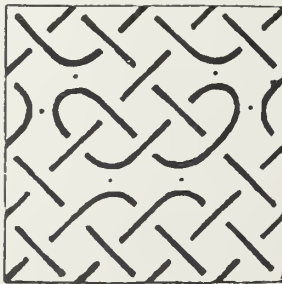
No. 328.



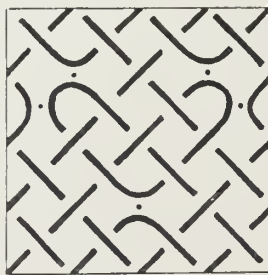
No. 329.

No. 329 may be got otherwise by placing together two **S**-shaped bends, one right-handed (No. 311) and the other left-handed (No. 311B).

By adding two horizontal breaks below the two **V**-shaped bends in No. 321 a distorted figure-of-eight ring with a cord passing each loop is



No. 330.



No. 331.



No. 332.

obtained (No. 330). This combination may be arrived at otherwise by placing together two unsymmetrical loops, one right-handed (No. 313) and the other left-handed (No. 313D).

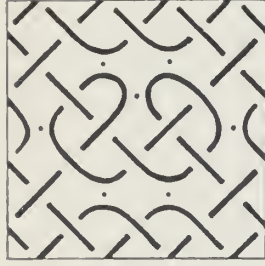
It will be observed that the loops are here in the same relative angular positions as in the case of the Stafford knot (No. 328), only they are further apart.

By adding one horizontal break below the two **U**-shaped bends, and

midway between them, in No. 321 a combination of two unsymmetrical loops, one right-handed and the other left-handed, with extra cords passing through the loops, is obtained (No. 331). It may also be looked upon as a Stafford knot (No. 328) with extra cords passing through the loops.



No. 333.



No. 334.



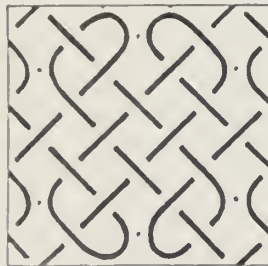
No. 335.

By adding one vertical break midway between the two U-shaped bends in No. 321, a combination of two unsymmetrical loops, one right-handed facing to the left (No. 313c) and the other left-handed facing to the right (No. 313E), is obtained (No. 332).

By adding breaks in a similar manner to No. 322, other combinations of unsymmetrical loops are obtained (Nos. 333 to 336).



No. 336.



No. 337.



No. 338.

By repeating No. 333, but with the loops facing symmetrically in the opposite direction, No. 337 is obtained.

By adding breaks to No. 323, a series of combinations is obtained in which S-shaped bends are the predominant feature (Nos. 338 to 341).

By adding breaks to Nos. 324 and 325, combinations of two unsymmetrical loops, one left-handed facing to the right (No. 313E) and the

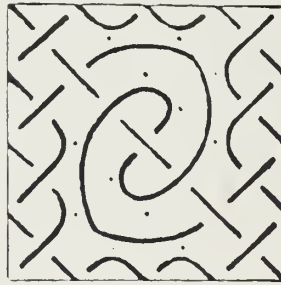
other left-handed facing to the left (No. 313G), are obtained (Nos. 342 and 343). The only difference between Nos. 342 and 343 is that the loops are further apart in the latter than in the former.

Combinations of unsymmetrical loops are employed very largely in Celtic interlaced-work, chiefly because they are so admirably adapted for ornamental purposes. The loops are almost always made pointed at the end, which greatly adds to the beauty of their form.

In all the knots it is the loops that give each combination its special



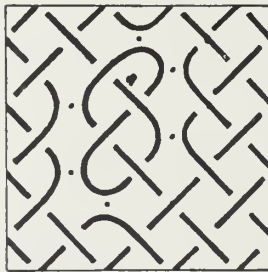
No. 339.



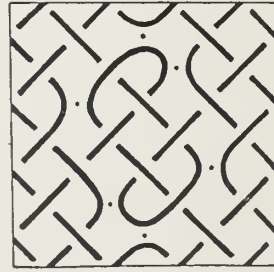
No. 340.



No. 341.



No. 342.

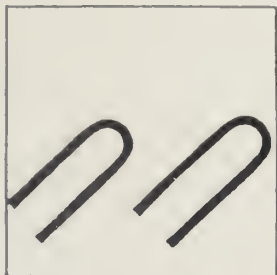


No. 343.

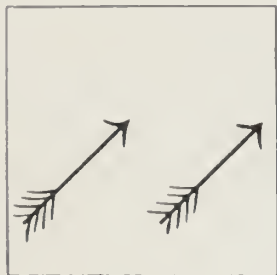
character, and by observing the relative positions of the loops and the direction of the pointed ends it is easy to distinguish one knot from another.

The best method, therefore, of classifying combinations of unsymmetrical loops is by dividing them into groups according to the directions in which the different pairs of loops can be made to point.

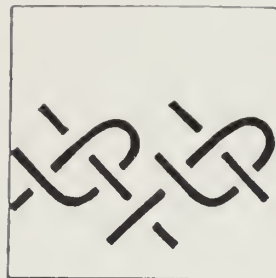
It has already been shown that all combinations of unsymmetrical loops may be derived from combinations of V-shaped bends by adding further breaks in the plait, the effect of which is to cause the cord to bend



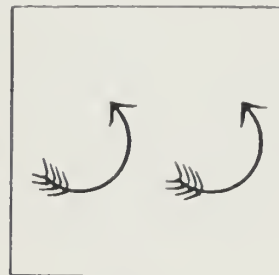
No. 344.



No. 345.



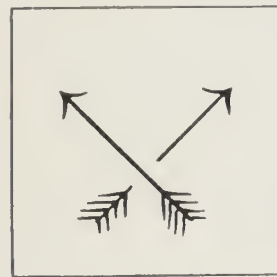
No. 346.



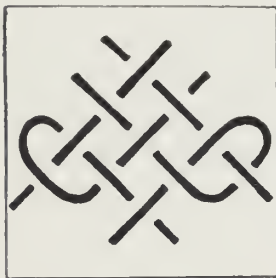
No. 347.



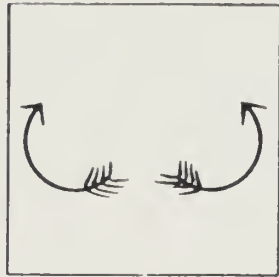
No. 344A.



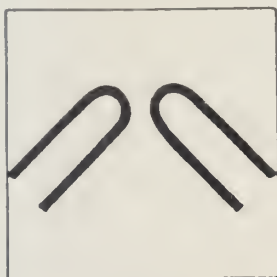
No. 345A.



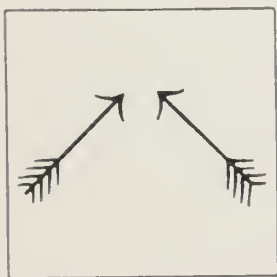
No. 346A.



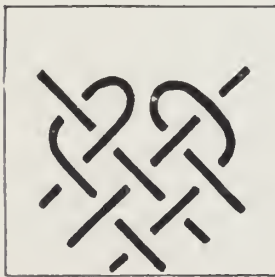
No. 347A.



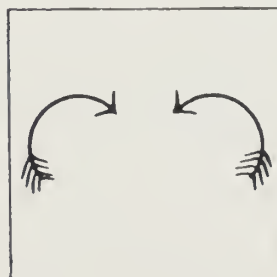
No. 344B.



No. 345B.



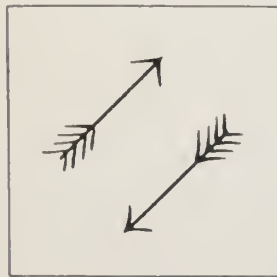
No. 346B.



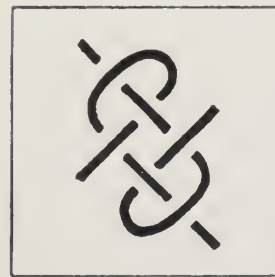
No. 347B.



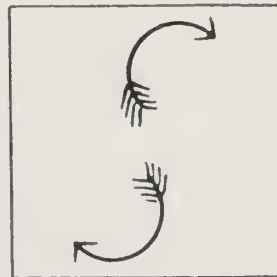
No. 344C.



No. 345C.



No. 346C.

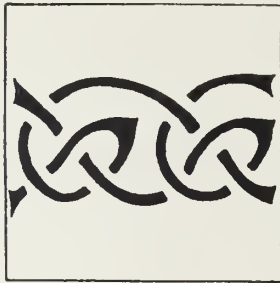


No. 347C.

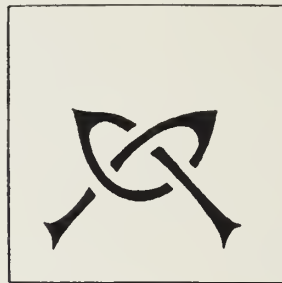
round through successive right angles, thus forming loops and spiral curves.

It is evident, then, that for every combination of U-shaped bends there is a corresponding combination of unsymmetrical loops, in which the loops are arranged in the same relative positions with regard to the direction in which they point as the U-shaped bends.

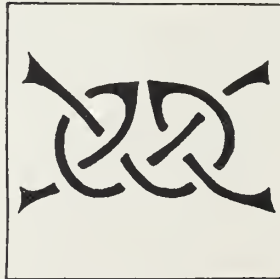
It has already been shown (Nos. 319 to 322) that U-shaped bends can only be arranged in four different ways, and the same rule applies to un-



No. 348.



No. 348A.



No. 348B.

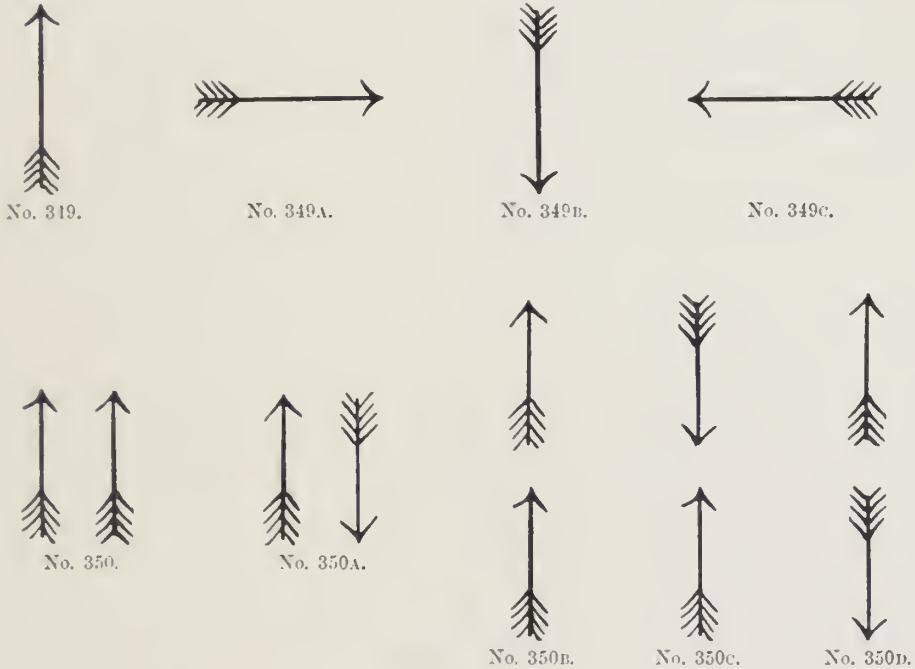


No. 348C.

symmetrical loops. The combinations of U-shaped bends and of loops are shown side by side, with arrows indicating the direction in which the knots point, on Nos. 344 to 346C.

A typical knot of each of the four kinds is given on Nos. 348 to 348C. All the combinations that can be derived from an unsymmetrical loop are produced either by rotating the figure round an axis in the plane of the paper or round an axis at right angles to the plane of the paper, or by altering the distance between the loops. If, therefore, for the purposes of

classification, the angular positions of the loops are fixed, all other changes must be caused by placing the loops further apart or nearer together. Thus, all combinations where the loops are of the same kind with regard to right or left-handedness, and which point in the same direction, are classed with No. 348; all combinations where the loops are of opposite kinds, and point away from each other, are classed with No. 348A; all combinations where the loops are of opposite kinds, and point towards each other, are



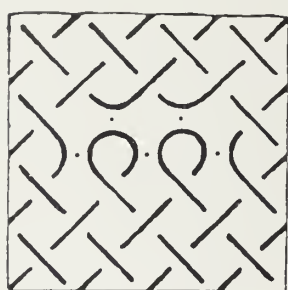
classed with No. 348B; and all combinations where the knots are of the same kind, and point away from each other, are classed with No. 348C.

The advantage of this system is that we are able to classify any interlaced pattern composed of unsymmetrical loops, no matter how far apart the loops may happen to be. If knots only were taken into account a large number of other patterns where the loops do not come sufficiently close together to be called knots would have to remain unclassified. It is, in fact, impossible to draw any line of demarcation between interlaced-work formed by the repetition of bends or loops at long intervals and knot-work.

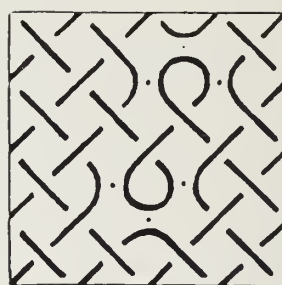
A symmetrical loop can only be varied in four ways by altering its angular position; it can be rotated round an axis at right angles to the plane of the paper, so as to point successively upwards (No. 349), to the right (No. 349A), downwards (No. 349B), or to the left (No. 349C).

If rotated round an axis in the plane of the paper no further changes will be produced, and therefore the symmetrical loop cannot be made right- or left-handed.

A pair of symmetrical loops may be combined in five different ways



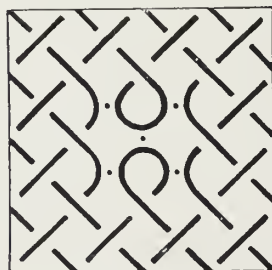
No. 351.



No. 352.



No. 353.



No. 354.



No. 355.

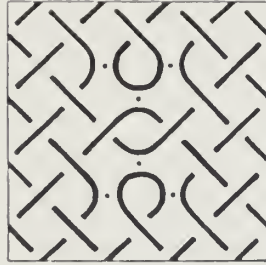


by placing them together in the positions indicated by the arrows, both parallel and pointing upwards (No. 350); both parallel, but one pointing upwards and the other pointing downwards (No. 350A); both in one straight line and pointing upwards (No. 350B); both in one straight line, one pointing upwards and the other pointing downwards, towards each other (No. 350C); and both in one straight line, one pointing upwards and the other pointing downwards, away from each other (No. 350D). A symmetrical loop pointing upwards or downwards cannot be combined for ornamental purposes with one pointing to the right or left.

The five ways of combining a pair of symmetrical loops are shown on diagrams Nos. 351 to 355. Each of these combinations may be placed sideways instead of upwards.



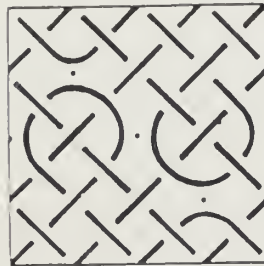
No. 351A.



No. 354A.



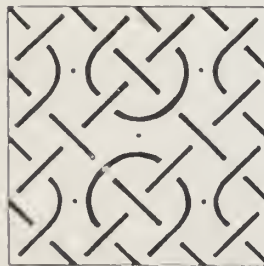
No. 356.



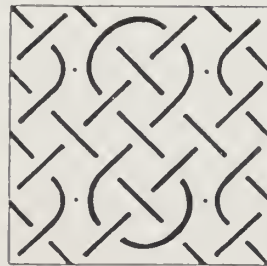
No. 357.



No. 358.



No. 359.



No. 360.



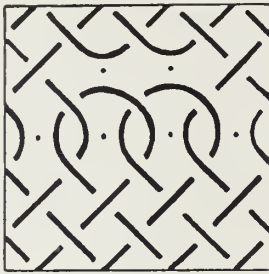
By increasing the distance between the loops, further combinations may be obtained, No. 351A being derived from No. 351 and No. 345A from No. 354.

Pairs of symmetrical loops, with extra cords passing through the loops

and crossing in the centre, are placed together exactly in the same way as in the preceding, the relative positions of the loops being indicated by the arrows (Nos. 356 to 360).

By bringing the loops closer together in Nos. 356, 357, 359, and 360, we get Nos. 356A, 357A, 359A, and 360A.

Further combinations may be obtained by making additional breaks in the plait, so as to bend the cord through one or more right angles after it leaves the loop.



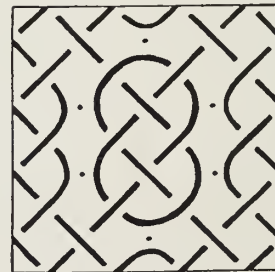
No. 356A.



No. 357A.



No. 359A.

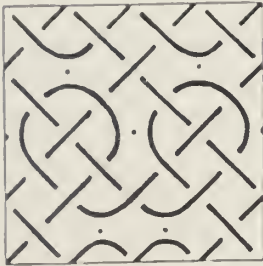


No. 360A.

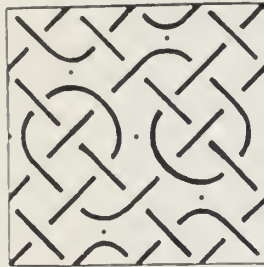
Thus—

No. 361	is derived from	No. 356.
No. 362	„	„ No. 357.
No. 363	„	„ No. 360.
No. 364	„	„ No. 360.
No. 365	„	„ No. 356A.
No. 366	„	„ No. 365.
No. 367	„	„ No. 359A.
No. 368	„	„ No. 360.

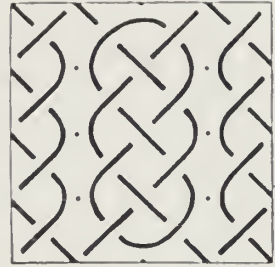
In all the combinations that have been considered hitherto, the loops have in every case been of the same kind, all the changes being produced by altering the angular position of the loop (either by rotating it round an axis at right angles to the plane of the paper, or round an axis in the



No. 361.



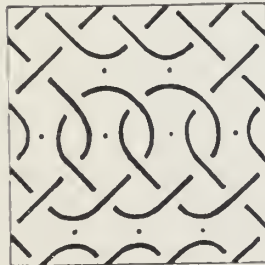
No. 362.



No. 363.



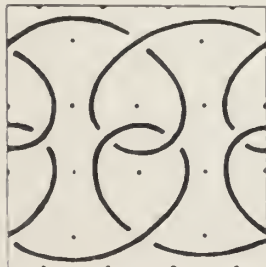
No. 364.



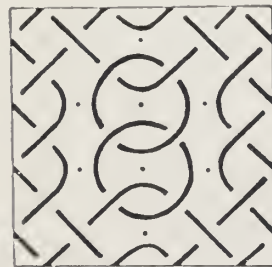
No. 365.



No. 366.



No. 367.



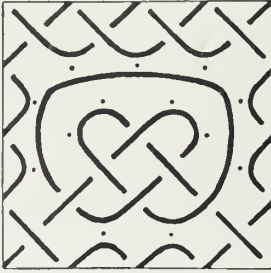
No. 368.

plane of the paper) and by altering the distances between the loops. It is, however, possible to form combinations of loops of two or more kinds, as in the following examples:—

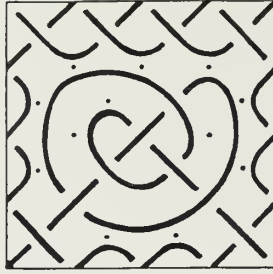
By enclosing two U-shaped bends within a symmetrical loop (No. 369).

By bending one of the cords of an unsymmetrical loop round spirally until it joins the cord passing through the loop (No. 370).

By bending the cord which passes through an unsymmetrical loop round spirally through four right angles (No. 371).



No. 369.



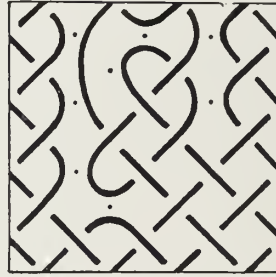
No. 370.



No. 371.



No. 372.



No. 373.



No. 374.



No. 375.

By bending round the cord which forms an unsymmetrical loop and the cord which passes through it both round spirally in the same direction (No. 372).

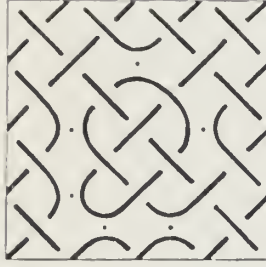
By combining an unsymmetrical loop, having one cord passing through

it, with an unsymmetrical loop having two cords passing through it (No. 373).

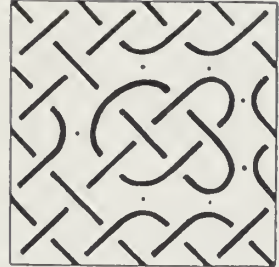
By combining similar loops to those in the preceding, but the cords



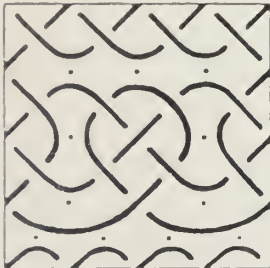
No. 376.



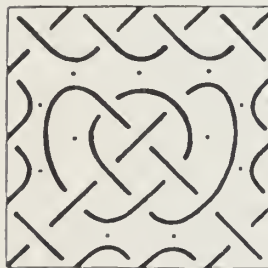
No. 377.



No. 378.



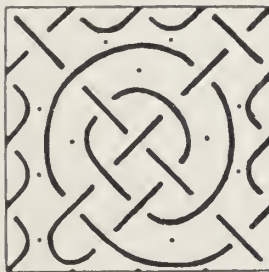
No. 379.



No. 380.



No. 381.



No. 382.



No. 383.

having an additional bend through a right angle after forming the loop (No. 374).

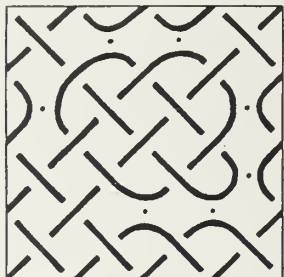
By enclosing a pair of symmetrical loops within a spirally bent cord (No. 375).

By combining a symmetrical loop, having two extra cords passing

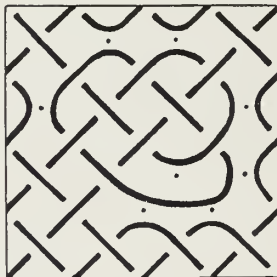
through the loop and crossing in the centre, with unsymmetrical loops and spirally bent cords (Nos. 376 to 383).

By combining unsymmetrical loops, having two and three cords passing through the loops (No. 384), from which may be derived Nos. 385 to 389 by making additional breaks in the plait.

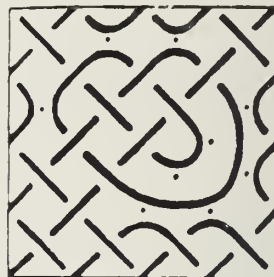
Nos. 386 and 387, both of which actually occur on sculptured stones in Scotland (the former at St Andrews and the latter at Barrochan), are



No. 384.



No. 385.



No. 386.



No. 387.



No. 388.



No. 389.

the most complex of all the combinations of loops derived from a plait we have yet examined.

There are some peculiar interlaced patterns, used occasionally in Celtic art, which cannot be classed with any of those hitherto described. Their special peculiarity consists in the introduction of cords crossing each other in horizontal and vertical directions parallel to the margin, instead of diagonally, as in the case of an ordinary plait and all patterns derived from it by making breaks in the usual way.

The difference in the method of making the break will be understood by comparing diagram No. 390 with No. 391.

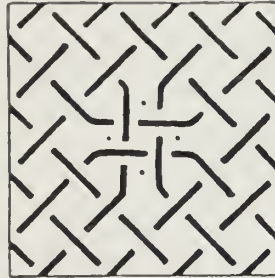
The following patterns are formed in this way (Nos. 392 to 394).

We have now exhausted all the ordinary knots, or combinations of bends and loops, that can be derived from a plait; but in addition to these there are two other sorts of interlaced patterns used in Celtic art. These may be termed circular knot-work and triangular knot-work respectively, on account of the special features which give them their peculiar appearance.

In circular knot-work, the elementary knot, which is repeated to form



No. 390.



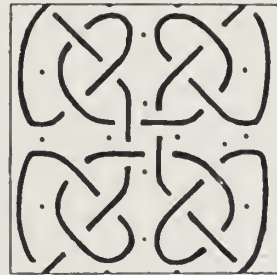
No. 391.



No. 392.



No. 393.



No. 394.

the pattern, consists of one or more concentric circular rings—sometimes complete, but more often not so—enclosing combinations of bends and loops of various kinds. When the encircling cord does not form a complete ring, there is either a gap left where the two ends turn inwards (No. 395), or the two ends of the cord may cross over or twist round each other before turning inwards (Nos. 396 and 397).

In a few rare instances a continuous spiral curve (No. 398) is substituted for the concentric circular rings (No. 399).

The circular rings are generally combined with two or four cords running diagonally and cutting each other nearly at right angles in the centre of the ring (Nos. 400 and 401).

It will be seen presently that the diagonal cords must either be made crooked, or the angle at which they cross must be altered from a right angle, so as to allow them to join on properly to the next elementary knot.

The idea of circular knot-work may possibly have been suggested by



No. 395.



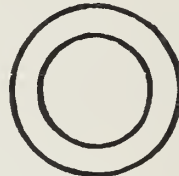
No. 396.



No. 397.



No. 398.



No. 399.



No. 400.



No. 401.

those patterns derived from a plait in which some of the cords make very distinct circular curves (Nos. 402 to 403A).

By pointing the ends of the loops and rounding the backs of the curves a very small amount of distortion is sufficient to transform Nos. 402 and 403, which are derived directly from plaits of eight and six cords respectively, into Nos. 402A and 403A, where their connection with the plaits is almost entirely lost sight of.

The resemblance between these patterns derived from plaits and

circular knot-work becomes still more close when additional cords, making undulating bends, are placed at each side (Nos. 402B and 403B).

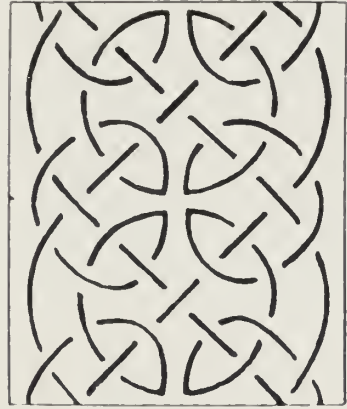
The most common series of circular knots seem to have been suggested by patterns Nos. 402A, 402B, and 403B. Pattern No. 402 is formed by the repetition of an elementary knot, composed of two unsymmetrical loops,



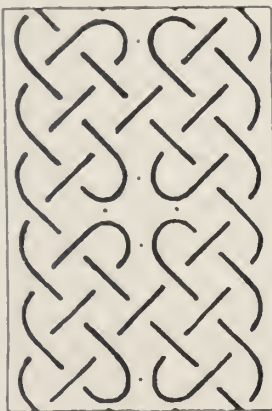
No. 402.



No. 402A.



No. 402B.



No. 403.



No. 403A.



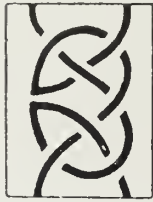
No. 403B.

placed together pointing towards each other (No. 404), arranged in a double row.

Now, if the attention be concentrated upon the portions of the pattern between each of the points where the bands cross in the centre, it will seem as if the whole was formed of repetitions of this knot (No. 405); but

if the attention be instead directed to the portions between the middle points of each of the knots, the pattern will appear to consist entirely of circular curves with two diameters crossing each other diagonally (No. 406).

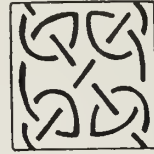
This element (No. 406) may be repeated in two or more rows to make a pattern (No. 407), which is the simplest kind of circular knot-work. It



No. 404.



No. 405.



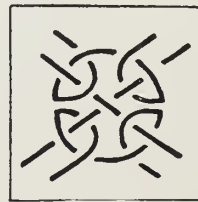
No. 406.



No. 407.



No. 408.



No. 408A.

may be used either with the breaks in the continuity of the circle facing upwards (No. 408) or sideways (No. 408A).

In pattern No. 403B, we get the suggestion of a double ring, one within the other. By making the outer ring complete and the inner one incomplete, No. 409 is obtained, and by making the inner ring complete and the outer one incomplete, No. 410 is obtained.

No. 411 is derived from No. 409 by producing the ends of the two lower loops and joining them on to the outer ring, so as to convert them into larger loops, at the same time closing up the gap at the bottom of the inner ring and transferring it to the outer ring.



No. 409.



No. 410.



No. 411.



No. 412.

No. 412 is derived from No. 409 in a somewhat similar way, the loops being the same size as in No. 411, but the two upper ones pointing downwards instead of upwards.



No. 409A.



No. 410A.



No. 411A.



No. 412A.

These four knots (Nos. 409 to 412) are so like each other that they are very liable to be confused unless the relative positions of the breaks in the continuity of the rings are carefully noticed. The ways in which the



No. 413.



No. 414.

broken and unbroken circles are combined in Nos. 409 to 412 are shown on Nos. 409A to 412A.

Two other knots may be got by making the two larger loops at the bottom face away from each other instead of towards each other, but it will

be found that half of the outer ring is left quite open, thus rendering the knots unsuitable for purposes of ornament. The circular arcs would in these cases occupy the positions shown on diagrams Nos. 413 and 414.

Much the most effective of the knots just described is No. 411, and it is therefore not surprising to find that it occurs with greater frequency than any of the others.

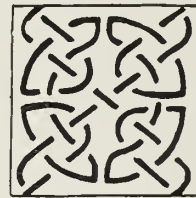
The following are further developments of this class of circular knot:—



No. 415.



No. 416.



No. 417.



No. 418.



No. 419.



No. 420.

By placing the four loops sideways (No. 408A), and surrounding them with an outer ring having the gap at the bottom, No. 415 is obtained, the arrangement of the breaks in the continuity of the rings being shown on No. 415A. This is not a good knot for ornamental purposes, because four cords come out at the top and only two at the bottom, so that it can only be made use of by placing the knots in pairs facing in opposite directions.

In No. 416 the inner loops are placed in the same position as in the preceding, but the outer and inner rings are joined and crossed over (No. 416A).

No. 417 is derived from No. 410 by placing it sideways and joining the outer and inner rings by radial lines (No. 417A) in two places.

In No. 418 the loops are alternately large and small, and two spiral cords (No. 418A) are substituted for the concentric rings.

No. 419 is the same as No. 409, except that the outer ring is double.

No. 420 is the same as No. 419, except that a single spiral cord is substituted for the rings.



No. 415A.



No. 416A.



No. 417A.



No. 418A.

The next set of four circular knots (Nos. 421 to 424) are founded on the Stafford knot, with two extra cords passing through the loops (No. 425).



No. 421.



No. 422.



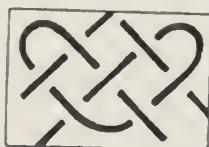
No. 423.



No. 424.

No. 421 is formed by placing two Stafford knots opposite each other and surrounding them with an unbroken ring, the arrangement of the broken and unbroken rings being shown in No. 409A.

No. 422 is derived from No. 421 by joining the circular curves of



No. 425.

the backs of the knots at the bottom, so as to make a gap in the inner ring at the top, and by joining two of the cords which pass through the loops to the outer ring, leaving a gap in the outer ring at the bottom, the arrangement of the broken and unbroken rings being shown in No. 411A.

No. 423 is derived from No. 412 by substituting a Stafford knot for the upper pair of loops, the rings being arranged as in No. 412A.

No. 424 is derived from No. 423 by making breaks in the continuity of the inner and outer rings at the top and joining them by radial cords as in No. 417A.



No. 426.



No. 427.



No. 429.

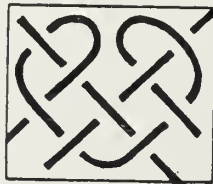


No. 430.

Nos. 426 and 427 are founded on a knot composed of two unsymmetrical loops having a pair of cords passing through the loops and crossing at right angles between them (No. 428).

In No. 426 a single knot is used, the outer ring being unbroken and the break in the continuity of the inner ring being at the top.

In No. 427 a pair of knots facing each other are used, and the cord



No. 428.



No. 431.

forming the outer ring has its continuity broken in two places and the cords are twisted together before they turn inwards (No. 397). This particular feature is the leading characteristic of the circular knot-work found in Italy. It is evidently of classical origin and occurs frequently in carved oak of the Renaissance period in this country.

Nos. 429 and 430 are founded on a knot composed of four unsymmetrical loops placed in pairs facing each other (No. 431).

Nos. 432 to 435 are founded on a knot composed of two symmetrical loops with extra cords passing through each loop and crossing in the centre (No. 436). The knots are in every case arranged in pairs facing each other, and the breaks in the continuity of the outer ring are made in different ways, as already explained (Nos. 395 to 397). In No. 434 a cord bent spirally like an S is introduced.



No. 432.



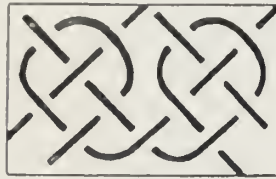
No. 433.



No. 434.



No. 435.



No. 436.

The remaining five circular knots (Nos. 437 to 441) are of rare occurrence and must be classed by themselves as being of a miscellaneous character.



No. 437.



No. 438.

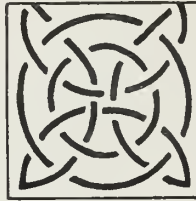
Nos. 439 and 440 can only be used in pairs or as the termination of another pattern. They are founded on two concentric rings combined with a ring forming four pointed loops, as in No. 496 described subsequently.

No. 441 is an ingenious adaptation of a pair of concentric cords with two cords passing through them diagonally and crossing at right angles in

the centre (No. 400). In five places where one cord crosses another it is made to twist round and join on to the cord it crosses, thus turning its direction sideways instead of going forward.



No. 439.



No. 440.



No. 441.

In circular knot-work the triangular spaces between the outer rings of the knots and the border (when they are arranged in a single row), and



No. 442.



No. 443.



No. 444.



No. 445.



No. 446.



No. 447.



No. 448.



No. 449.



No. 450.



No. 451.

the four-sided spaces in the middle between any four knots (when they are arranged in a double row), are filled up in a variety of ways, as shown on diagrams Nos. 442 to 454.

In No. 442 the cords run parallel to each other.

In No. 443 the cords are crossed over.

In No. 444 the cords are crossed over and each formed into a symmetrical loop at the top.

In No. 445 the cords run parallel and the upper one forms a symmetrical loop through which the lower one passes.

In No. 446 one cord forms an unsymmetrical loop through which the other passes.

In No. 447 one cord forms a Stafford knot and the other cord passes through the loop on the right which has a round end, whilst the loop on the left has a pointed end.

In No. 448 one cord forms itself into two unsymmetrical loops with pointed ends and a symmetrical loop midway between them, whilst the other cord passes through each of the unsymmetrical loops.



No. 452.



No. 453.



No. 454.

In No. 449 the cords form V shaped bends with pointed ends placed cross-wise.

In No. 450 one cord forms a Stafford knot and the other passes through both of the loops.

No. 451 is the same as No. 450, but has in addition a symmetrical loop instead of a point at the bottom.

In No. 452 the two pairs of cords cross over each other.

In No. 453 one cord out of each pair crosses over the other in the ordinary way, whilst the remaining cords are bent round at an angle of 45° before they cross each other.

In No. 454 one pair of cords are made discontinuous and formed into two V shaped bends with pointed ends and cross over the other pair of cords.

Nos 453 and 454 occur on the stone from Collicburn in the Dunrobin

Museum, these artifices being resorted to in order to avoid making an awkward curve where pairs of cords which are not in one straight line have to be joined.

In triangular knot-work the surface to be decorated is divided first into squares, which are again subdivided into two or four triangles by diagonal lines. Each triangle is then filled in with a knot composed of cords forming bends and loops of the same kind as those derived from a plait, but adapted to suit the peculiar shape of the space to be filled.

The following are examples of the most common elementary triangular knots (Nos. 455 to 475).



No. 455.



No. 456.



No. 457.



No. 458.



No. 459.



No. 460.



No. 461.



No. 462.



No. 463.

No. 455 is a symmetrical loop.

No. 456 is a Stafford knot.

No. 457 is a Stafford knot with the two cords at the bottom crossed over each other.

No. 458 is a Stafford knot with extra cords passing through the loops.

No. 459 is a combination of two Stafford knots placed one on the top of the other.

No. 460 is similar to No. 459, but with a symmetrical loop added.

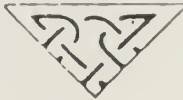
No. 461 is a Stafford knot combined with a symmetrical loop having two cords passing through it and crossing at right angles.

No. 462 is a Stafford knot combined with a pair of unsymmetrical loops facing in opposite directions.

No. 463 is a Stafford knot combined with a symmetrical loop having two cords passing through it and two symmetrical loops without extra cords.

Nos. 464 to 466 are composed of pairs of unsymmetrical loops.

Nos. 467 and 468 are founded on knot No. 436.



No. 464.



No. 465.



No. 466.



No. 467.



No. 468.



No. 469.

No. 469 is an ordinary plait with a symmetrical loop introduced at each of the two upper corners.

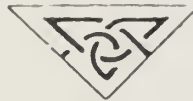
No. 470 is an unsymmetrical loop.

No. 471 is a Stafford knot with an extra loop added.

No. 472 is a combination of two loops linked with each other.



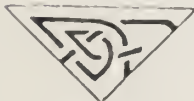
No. 470.



No. 471.



No. 472.



No. 473.



No. 474.



No. 475.

Nos. 473 and 474 are spiral knots.

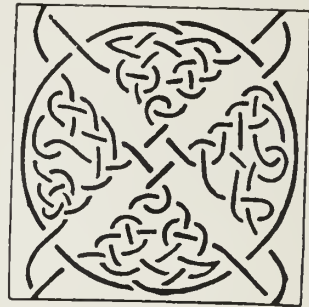
No. 475 is a combination of two Stafford knots and a symmetrical loop having two crossed cords passing through it.

In some of the most elaborate knots which occur in Celtic interlaced-work the principles of circular and of triangular knot-work are combined as in Nos. 476 and 477.

Certain patterns composed entirely of interlaced rings must be classed by themselves, as they are somewhat different from any of those previously described. Rings are used very sparingly in Celtic art, and are only introduced in such a manner as to produce a good effect from a decorative point of view. If rings are mixed indiscriminately with knots, as in the interlaced-work in some of the Carlovingian MSS., the neatly-finished appearance of the pattern is quite spoilt. When the eye has once become accustomed to the look of Celtic interlaced-work of the best period, the existence of a ring in any part of the pattern is immediately detected, and grates on the sensitive artistic temperament, much in the same way as a false note in music offends the well-trained ear. The occurrence of rings amongst knot-work is generally due to lack of skill on the part of the



No. 476.



No. 477.

designer, unless they are used with deliberate intent, either to emphasise certain points in the pattern,¹ or combined in a symmetrical manner round a central point.

As an instance of the first method of employing rings, we have the twist and ring, or plait and ring, where each of the crossing points of the cords of the twist or plait is emphasised in this way. In the second case, two or more rings are interlaced so as to form a symmetrical combination like a rosette, suitable for placing in a prominent position, such as the centre of a cross, round which the rest of the design may be grouped. Here the contrast between the rings and the knots is turned to good account.

¹ On the same principle that spots, rosettes, or sprigs are distributed over the surface of a wall-paper or woven fabric.

The mathematical shape of a ring includes all curves that can be described by a moving point which finally returns to the position it started from. A ring can be made practically with a piece of cord by uniting the two ends. All the patterns used in Celtic interlaced-work are in reality composed of rings, because the ends of the cords are always joined, but when we speak of a ring we only refer to those whose shapes are not too complicated, and which can easily be followed by the eye.

The simplest kind of ring is that of circular form (No. 478). A circular



No. 478.



No. 479.



No. 480.



No. 481.



No. 482.



No. 483.



No. 484.



No. 485.



No. 486.



No. 487.



No. 488.

ring may be distorted by making it oval (No. 479), undulating (No. 480), with one or more loops on the outside (Nos. 481 to 484), or with loops on the inside (Nos. 485 to 488).

By increasing the size of the interior loops until they overlap, shapes suitable for interlaced-work will be produced, as in :—

No. 485A derived from No. 485.

No. 486A „ „ No. 486

Nos. 487A and 487B „ „ No. 487.

And No. 488A „ „ No. 488.

The following combinations of circular, oval and looped rings are used in Celtic interlaced-work (Nos. 489 to 500).

No. 489 is a pair of oval rings placed cross-wise and interlaced.

No. 490 is the same as No. 489, but composed of double oval rings.



No. 485A.



No. 486A.



No. 487A.



No. 487B.

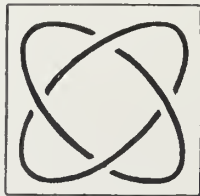


No. 488A.

No. 491 is No. 489 combined with a pair of concentric circular rings.

No. 492 is derived from No. 491 by making gaps in the rings and joining them by radial lines.

No. 493 is a circular ring interlaced with an undulating or cruciform ring.



No. 489.



No. 490.



No. 491.

No. 494 is a combination of two oval rings placed cross-wise and interlaced, as in No. 489, with one large circular ring and four smaller ones.

No. 495 is a circular ring combined with a ring having four exterior loops, which are made pointed at the ends.

No. 496 is the same as No. 495, but with a double circular ring.

No. 497 is a circular ring combined with a ring having four overlapping loops, as in No. 488A.

No. 498 is derived from No. 495 by removing the centre so as to convert the four pointed loops into four vesica-shaped rings.

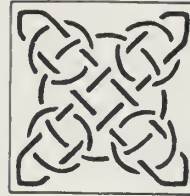
No. 499 is the same as No. 498, but the four pointed rings are split up into eight.



No. 492.



No. 493.



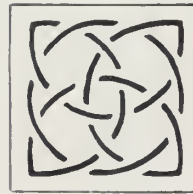
No. 494.



No. 495.



No. 496.



No. 497.



No. 498.



No. 499.



No. 500.

No. 500 is the same as No. 499, but with the rings changed into loops.

Having now described all the different kinds of interlaced-work used in Celtic art, we are able to classify the whole and give the localities where each particular pattern occurs.

Analysis of Interlaced-Work, with the Localities where
each Pattern occurs.

INTERLACED-WORK FILLING RECTANGULAR SPACES.

Plait-work (Nos. 501 to 506).



No. 501.—Two-cord Plait
or Twist.

Bressay.
Cossins.
Benvie.
St Andrews, No. 1.
Mountblow House.
Inchinnau, No. 3.
Stanlie.
Lesmahagow.
Whithorn, No. 4.
Jedburgh, No. 1.
Closeburn.



No. 502.—Three-cord Plait.

Monymusk.
Kirriemuir, No. 4.
Rossie.
Mountblow House.
Roseneath.
Borthwick, No. 2.



No. 503.—Four-cord Plait.

Bressay.
Ulster.
Kilbar.
Drainie, No. 10.
Farnell.
Benvie.
Kirriemuir.
St Vigean's, No. 10.
" No. 12.
Hamilton.
Mausfield.
Whithorn, No. 4.
Govan, No. 4.
" No. 6.
" No. 9.
" No. 15.
" No. 32.
" No. 34.
St Madoes, No. 2.
Abercromby, No. 1.
" No. 2.
" No. 4.
Ardochattau.
Inchinnan, No. 2.
" No. 3.
Stanlie.
Kilfinan.

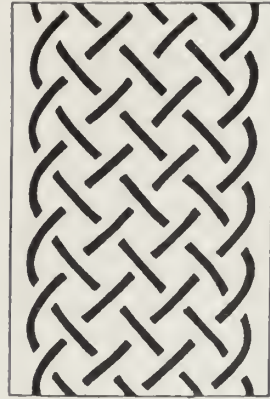
ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*



No. 504. —Five-cord Plait.



No. 505. —Six-cord Plait.



No. 506. —Eight-cord Plait.

Hamilton.
Govan, No. 7.
.. No. 16.
Roseneath.

Flotta.
Glamis, No. 2.
Aldbar.
Menmuir, No. 1.
St Vigean's, No. 10.
.. No. 11.
Meigle, No. 4.
Govan, No. 21.
.. No. 26.
.. No. 28.
.. No. 29.
.. No. 30.
Coldingham.
Hoddan, No. 2.
St Andrews, No. 3.
.. No. 4.
.. No. 15
Tullibole.
Jordan Hill.

Rothesay, No. 1.
Jordan Hill.
Liberton, No. 1.

Ten-cord Plait.

Dunblane, No. 2.

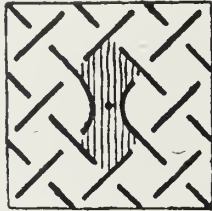
Twelve-cord Plait.

Mountblow House.

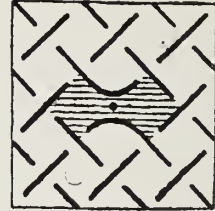
It has not been thought necessary to give the localities in other parts of Great Britain where plaits occur, as nearly the same proportion holds good elsewhere as in Scotland between the number of monuments with plaits of different numbers of cords. Four-cord plaits are everywhere the most common; next to these six-cord plaits; then plaits of two, three, and eight cords; then plaits of ten cords and over; and lastly, plaits of five, seven, and nine cords are the rarest.

It appears from this analysis that plaits composed of an uneven number of cords are very seldom used, probably because they are not quite so easy to draw, and when drawn they look "lop-sided." Also, since the crossing-points of the cords on each side of a plait composed of an uneven number of cords are not opposite each other, as explained on p. 144, the cords cannot be joined up properly where the plait is finished off at each end of the panel.

When the number of cords exceeds six the effect of a large surface covered with a plait becomes monotonous, and breaks are generally introduced for the sake of variety.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.**Combinations of V-shaped bends (Nos. 507 to 523).*

No. 203 (repeated).—Vertical break.



No. 204 (repeated).—Horizontal break.

A V-shaped bend is produced by making a single break in a plait, and, as has already been explained (see p. 162), the bends must always occur in pairs facing each other. If the break is horizontal (No. 204), one bend will face upwards (No. 309) and the other downwards (No. 309B). If the break is vertical (No. 203), one bend will face to the right (No. 309A) and the other to the left (No. 309C).



No. 507.—A Six-cord Plait with Horizontal Breaks in the two Middle Vertical Rows of Crossing-points, and having three Crossing-points between each Break.

Ireland—

Kells, Co. Meath.

Monasterboice, Co. Louth.

Wales—

Penally, Pembrokeshire.

MSS.—

Book of Kells.



No. 508.—A Twelve-cord Plait with Horizontal Breaks in the Vertical Rows of Crossing-points next but one to the edge of the Plait, and having one Crossing-point between each Break.

Inchinnau.

No. 508A (no diagram).—An Eight-cord Plait with Breaks made as in No. 508.

Wales—

Penally.

MSS.—

Stockholm Gospels.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*



No. 509.—A Six-cord Plait with Horizontal Breaks in the Middle Vertical Row of Crossing-points, and having one Crossing-point between each Break.

Jedburgh, No. 1.
Whithorn, No. 2.
Jordanhill.

Wales— [shire.
Llanbadarn Fawr, Cardigan.
Metalwork—
Soiscel Molaise.



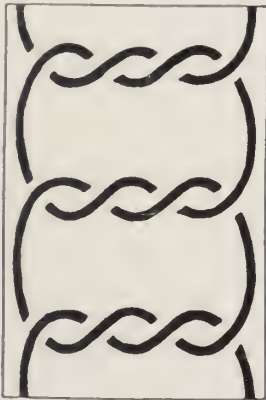
No. 510.—An Eight-cord Plait with Horizontal Breaks in the Middle Vertical Row of Crossing-points, as in No. 509, but with Vertical Breaks in the two outer Vertical Rows of Crossing-points, and having one Crossing-point between each Break.

England—
St Neot, Cornwall.



No. 511.—A Six-cord Plait with Horizontal Breaks in the Middle Vertical Row of Crossing-points, the Breaks occurring at every Crossing-point.

England—
Hexham, Northumberland.



No. 512.—An Eight-cord Plait with Horizontal Breaks in all the Vertical Rows of Crossing-points except the two outer ones, made in such a way as to produce a series of Twists placed horizontally.

England—
Stanwick, Yorkshire.



No. 513.—A Four-cord plait with Vertical Breaks in the Middle Vertical Row of Crossing-points, there being two Crossing-points between each Break.

Benvie.



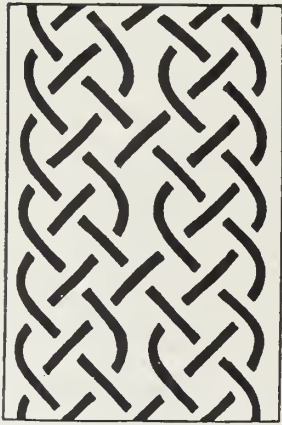
No. 514.—A six-cord Plait with Vertical Breaks in the Middle Vertical Row of Crossing-points, there being one Crossing-point between each Break.

Whithorn, No. 6.

No. 513A (no diagram) —An Eight-cord Plait with Breaks made as in No. 513.

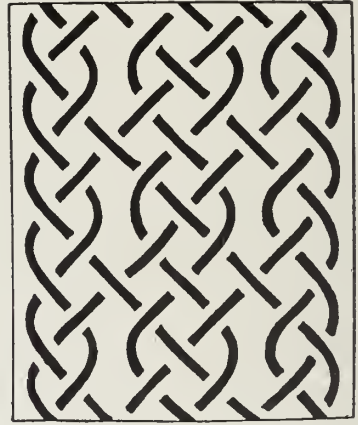
Rothesay, No. 2.

MSS.—Brit. Mus. (Harl. 2788).

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*

No. 515.—An Eight-cord Plait with Breaks made as in No. 514.

Whithorn, No. 11.
 „ No. 5.
 Inchinnan, No. 2.



No. 516.—A Ten-cord Plait with a Double Row of Vertical Breaks similar to those in Nos. 514 and 515.

Whithorn, No. 7.



No. 517.—A Four-cord Plait with Vertical Breaks in the two outer Vertical Rows of Crossing-points, there being two Crossing-points between each Break.

Switzerland—
 Zürich Cathedral.



No. 518.—A Six-cord Plait with Breaks similar to those in No. 517.



No. 519.—A Four-cord Plait with Breaks similar to those in No. 517, but with only one Crossing-point between each Break instead of two. This may be looked upon otherwise as a Twist composed of a Double Cord.

Rothesay.
Ireland—
 Clonmacnois, King's Co.
MSS.—
 Book of Kells.
Metalwork—
 Tara brooch.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued*.



No. 520.—A Six-cord Plait with Breaks similar to those in No. 519.

England—
Thornhill, Yorkshire.



No. 521.—An Eight-cord Plait with Breaks similar to those in Nos. 519 and 520.



No. 522.—A Four-cord Plait with Vertical Breaks made alternately in the Middle and Outer Vertical Rows of Crossing-points, in such a way as to produce a series of Twists placed vertically.

Rothsay, No. 1.



No. 523.—An Eight-cord Plait with Vertical Breaks in the three Middle Vertical Rows of Crossing-points, and Horizontal Breaks in the Rows on each side next but one to the edge.

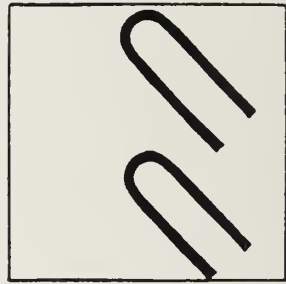
England—
Coppleston, Devonshire.

No. 523A (no diagram).—A Six-cord Plait with Vertical Breaks made as in No. 523, but without any Horizontal Breaks.

MSS.—
Brit. Mus. (Vit., f. xi.).

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued*.*Combinations of U-shaped Bends (Nos. 524 to 543).*

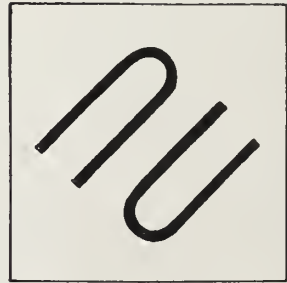
No. 524.—A Five-cord Plait with U-shaped Bends placed all facing to the left (No. 310c) as in No. 344.



No. 344.—Repeated to show relative position of U-shaped Bends in No. 524.



No. 525.¹—An Eight-cord Plait with U-shaped Bends facing upwards (No. 310) and downwards (No. 310b) as in No. 344c.



No. 344c.—Repeated to show relative positions of U-shaped Bends in No. 525.

Inchinnan, No. 1.

England—
Durham Cathedral.

¹ Strictly speaking, this pattern belongs to the combinations of S-shaped Bends, but it is inserted here to show its connection with No. 524.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued*.



No. 526.—An Eight-cord Plait with U-shaped Bends facing upwards (No. 310) and to the left (No. 310c) as in No. 344A.

Rothesay, No. 2.
Flotta.



No. 344A.—Repeated to show relative positions of U-shaped Bends in No. 526.

The pattern on the cross-shaft in Rothesay Churchyard has a variation at the bottom, where two spiral knots (No. 347) are introduced, thus illustrating in a very clear manner the process of the evolution of the spiral knot from the plait after passing through the intermediate stage (No. 526). The same thing occurs on the cross-shafts at Whithorn (No. 1), Abercorn (No. 1), and Rothbury, in Northumberland.



No. 527.—The same as No. 526, except that every alternate pair of U-shaped Bends points in the opposite direction.

MSS.—
Gospels of Charlemagne.



No. 528.—A Ten-cord Plait with U-shaped Bends placed as in No. 526, there being a slight modification at the right-hand upper corner.

Whithorn, No. 1.

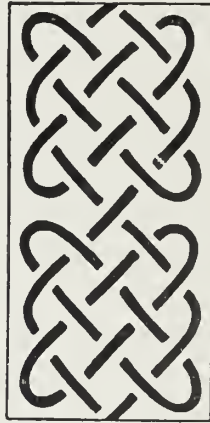
ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*

No. 529.—A Five-cord Plait with U-shaped Bends placed in pairs as in No. 344A, but with the pairs facing to the right instead of facing upwards, there being two Crossing-points between each break in the Plait.

Skinnet.

MSS.—

Paris Gospels.



No. 530.—A Six-cord Plait with U-shaped Bends placed in pairs as in No. 529, but with the pairs facing in opposite directions on both sides of the Plait instead of only on one side.

England—

Dewsbury, Yorkshire.



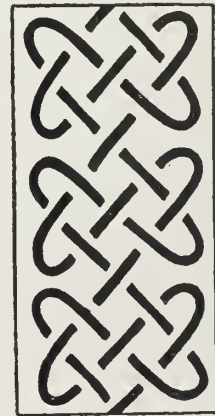
No. 531.—A Four-cord Plait with U-shaped Bends placed in pairs as in No. 529 but closer together.



No. 532.—The same as No. 531, but with the pairs of U-shaped Bends placed alternately on opposite sides of the Plait.

England—

Sandbach, Cheshire.



No. 533.—The same as No. 530, but with the U-shaped Bends closer together.

England—

Kirriemuir, No. 3.

St Vigeans, No. 12.

St Andrews, No. 14.

Kirkholm.

Thornhill.

England—

Tynemouth, Nor-

thumberland.

Blackwell, Derby-

shire.

Ireland—

Kells.

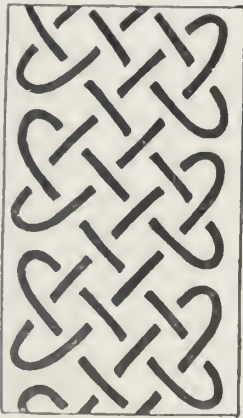
Clonmacnois.

MSS.—

Psalter, St John's

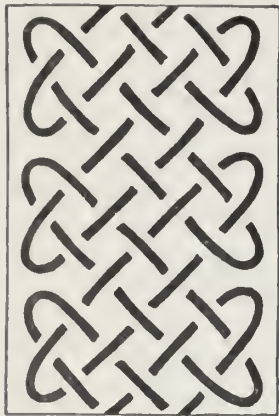
Coll., Camb.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*



No. 534.—A Seven-cord Plait with the pairs of U-shaped Bends arranged as in No. 533. It will be noticed that, since the number of cords forming the Plait is uneven, the pairs of U-shaped Bends do not occur opposite each other.

Meigle, No. 15.



No. 535.—An Eight-cord Plait with the pairs of U-shaped Bends arranged as in No. 533.

MSS.—
Brit. Mus. (I.E. vi.)



No. 536.—A Six-cord Plait with the Pairs of U-shaped Bends arranged as in No. 527, but closer together.

Ireland—
Clonmacnois.
Kells.
MSS.—
St Gall Gospels.
Charlemagne Gospels.



No. 537.—A Six-cord Plait with the U-shaped Bends arranged as in No. 527.

Ireland—Kells.



No. 538.—The same as No. 533, but with Vertical Breaks in the Middle Vertical Row of Crossing-points, there being one Crossing-point between each Break.

Dupplin.

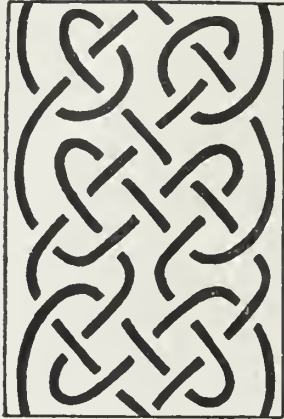


No. 539.—The same as No. 530, but with Horizontal and Vertical Breaks added.

Rothsay, No. 2.

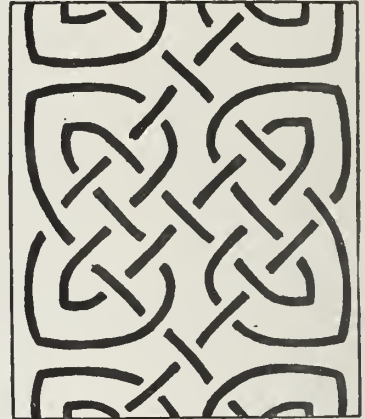
No. 537A (no diagram).—The same as No. 537, but with the Horizontal and Vertical Breaks in the two outer rows of Crossing-points interchanged.

MSS.—Brit. Mus. (I.E. vi.)

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*

No. 540.—The same as No. 527, but with a Vertical Break added in the Middle.

Abercorn, No. 1.



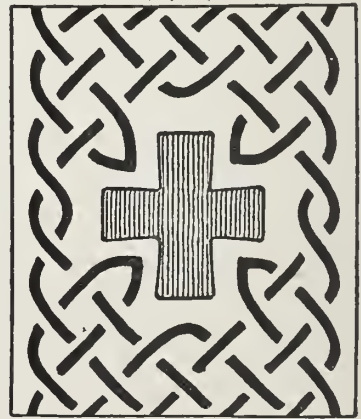
No. 541.—A Ten-cord Plait with the U-shaped Bends arranged as in No. 533, but with additional Breaks.

Flotta.
England—
Aycliffe, Co. Durham.
MSS.—
St Gall Penetentiale.



No. 542.—The same as No. 541, but with the U-shaped Bends further apart.

MSS.—
St Gall Penetentiale.

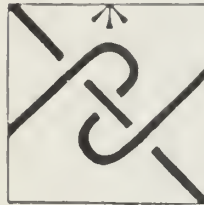
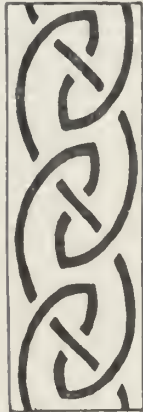


No. 543.—A Ten-cord Plait with a Cruciform Space cut out of the Plait and bounded by four V-shaped Bends and four U-shaped Bends.

St Andrews, No. 1.
England—
Stonegrave, Yorkshire.
MSS.—
St Petersburg Gospels.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*

Combinations of S-shaped Bends (Nos. 544 to 548).



No. 311B repeated.



No. 544.—Pattern derived from a Four-cord Plait composed of S-shaped Bends, all left-handed and facing upwards (No. 311B).

No. 545.—The same as No. 544, but with an extra Convolution of the S-shaped Bend.

- St Andrews, No. 15.
 Eilan Mòr.
 Jordan Hill.
 Govan, No. 15.
- England*—
 Crowle, Lincolnshire.
- Wales*—
 Llandough, Glamorganshire.
 Llantwit Major, "
 Llandaff, "
 Llanymnis, Brecknockshire.
 Penally, Pembrokeshire.
- Ireland*—
 Monasterboice.
 Kells.
 Clonmacnois.
 Ullard.
- MSS.*—
 Lindisfarne Gospels.
 Stockholm "
 St Gall "
 Metz "
 Brit. Mus. (Vesp. A. i.)
 " " (Galba A. xviii.)
- Metalwork*—
 Ardagh chalice.
 Rogart brooch.
 Perth "
 Ardagh "
 Tara "

- MSS.*—
 St Gall Gospels.
 Book of Kells.
 Book of Durrow.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*

No. 546.—Composed of S-shaped Bends, all right-handed and facing to the right (No. 311A) and with an extra Convolution of the S-shaped Bend.



No. 547.—A Six-cord Plait with S-shaped Bends, all left-handed and facing to the right (No. 311c).



No. 548.—A Six-cord Plait with Pairs of S-shaped Bends, one right-handed and facing upwards (No. 311) and the other left-handed, facing upwards (No. 311B).

England—

St Neot, Cornwall.

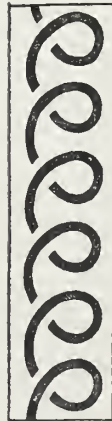
MSS.—

St Gall Gospels.

The geographical distribution of the S-shaped knot is remarkable. Although common in Ireland, S. Wales, and the West of Scotland, it is almost entirely absent in other parts of Great Britain. It occurs in the MSS. and on the metalwork of the best period A.D. 700 to 750.

Combinations of Symmetrical Loops (Nos. 549 to 555).

No. 303 repeated.—Symmetrical Loop facing upwards.



No. 549.—A single Cord forming a series of Loops all facing to the right (derived from a Three-cord Plait, see No. 210).

Tullibole.

Metalwork—

Hunterston brooch.



No. 550.—A single Cord forming a series of Loops facing alternately to the right and left (derived from a Five-cord Plait).

England—

Brompton, Yorkshire.

Hawkser, „

Foreign—

Rome, Forum.

Como, Sant' Abondio.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*

It will be noticed that when the number of cords in the plait is even the loops come exactly opposite each other, but when the number of cords in the plait is uneven the loops on one side are just half-way between those on the other side.



No. 551.—A Combination of a pair of Cords, each forming a series of Loops facing alternately to the right and left (derived from a Six-cord Plait).



No. 552.—A Combination of two Cords, each forming a Series of Twists and Loops, facing in one case to the right and in the other to the left. The two Cords are independent of each other, but the Loops interlock (derived from a Six-cord Plait).



No. 553.—A pair of Cords, looped as in No. 549, but with the Loops facing towards each other and linked together.

Papil.
Meigle, No. 22.
Iona, No. 8.

England—

Dearham, Cumberland.
Irtton,¹ Cumberland.
Leeds,² Yorkshire.
Catterick, Yorkshire.
Eyam, Derbyshire.
Bakewell, Derbyshire.
Barnack, Northamptonshire.

Metalwork—

Hunterston brooch.

MSS.—

St Gall, MS. No. 57.

No. 552a (no diagram) modifications of No. 552.

England—

Coppleston, Devon.

Wales—

Carew, Pembrokeshire.

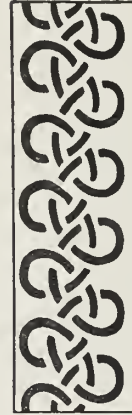
St Vigean, No. 14.
Dunfallandy.
Rossie.
Forteviot, No. 1.

¹ Small portions of this looped pattern are used for decorating the panels on the ends of the horizontal arms of the cross at Irtton, Catterick, Eyam, and Bakewell.

² This is almost the only example of the occurrence of the pattern otherwise than on the ends of the arms of the cross. The Leeds cross is of Scandinavian rather than of Celtic or Saxon type.

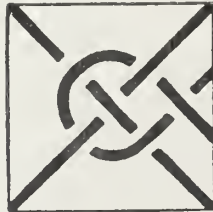
ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*

No. 554.—The same as No. 553, but with the Loops facing away from each other and the portions of the Cords between the Loops linked together.



No. 555.—The same as No. 553, but with the Loops of one Cord half way between the Loops of the other Cord.

Combinations of Symmetrical Loops having two cords passing through the centres of the loops and crossing at right angles (Nos. 556 to 587).



No. 305 repeated.—Symmetrical Loop and crossed Cords facing upwards.



No. 556.—Combination of Loops all facing upwards, there being two Crossing-points between the centres of the Loops (derived from a Six-cord Plait, see No. 358).

England—

Wakefield, Yorkshire, now in the York Museum.

No. 556A (no diagram).—Modifications of No. 556.

Ireland—

Drumcliff, Co. Sligo.

MSS.—

Brit. Mus. (Harl. 2788.)

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*



No. 557.—Combination of Loops in pairs facing to the right and left, there being two Crossing-points between the centres of the Loops (derived from a Ten-cord Plait, see No. 360).

Kirkinner.
Whithorn.
MSS.—Book of Durrow.
Metalwork—Ardagh chalice.



No. 558.—Combination of Loops similar to No. 557, but with the Loops facing upwards and downwards instead of to the right and left (derived from a Ten-cord Plait, see No. 360).

Whithorn, No. 3.
Metalwork—
Bronze mounting, Norway (O. Rygh, No. 619).



No. 559.—Combination of Loops similar to No. 558, but with a Double Band (derived from an Eight-cord Plait).

England—Tynemouth, Northumberland. |



No. 560.—Combination of Loops in pairs facing to the right and left, there being one Crossing-point between the centres of the Loops (derived from an Eight-cord Plait, see No. 360).

Kirkinner.

No. 560A (no diagram).—The same as No. 560, but with the Figure-of-eight rings arranged in more than one Vertical Row, so as to cover a large surface. Used in late Irish work.

Ireland—Tuam, Co. Galway.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*

No. 560B (no diagram).—The same as No. 560, but with the Loops on the right side just half-way between each Loop on the left side, instead of being opposite each other (derived from a Seven-cord Plait) used in late Irish work to cover a large surface.

Ireland—Tuam, Co. Galway.
Glendalough, Co. Wicklow.



Metalwork—
Shrine of St Lactin's Arm.



No. 561.—Combination of Loops similar to No. 560, but with the Loops brought closer together vertically so as to link with each other, thus forming a chain of Figure-of-eight Rings (derived from an Eight-cord Plait).

No. 562.—Combination of Loops in pairs facing upwards and downwards, there being one Crossing-point between the centres of the Loops (derived from a Six-cord Plait).

England—Dewsbury, Yorkshire.
Thornhill, „
Hartshead, „



No. 563.—Combination of Loops similar to No. 562, but with the pairs of Loops arranged in two Vertical Rows instead of one (derived from an Eight-cord Plait).

No. 564.—Combination of Loops similar to No. 562, but with Double Band forming the Loops (derived from a Six-cord Plait).

England—Thornhill, Yorkshire.

England—Stonegrave, Yorkshire.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*



No. 565.—Combination of Loops similar to No. 562, but with Double Band forming both Loops and the Cords passing through them (derived from an Eight-cord Plait).

England—

Coppleston, Devonshire.

MSS.—

Stockholm Gospels.
St Vast ,,



No. 566.—Combination of Loops in pairs facing to the right and left, there being no Crossing-point between the centres of the Loops. This forms the Figure-of-eight Knot (derived from a Six-cord Plait, see Nos. 226 and 360A).

Monifieth, No. 4.

Meigle, No. 4.

St Vigean's, No. 9.

England—

Hackness, Yorkshire.

Melsoyby, ,,

Collingham, ,,

Ireland—

Monasterboice.

Kilkispeen, Co. Kilkenny.

Wales—

Margam, Glamorganshire.

MSS.—

St Gall Gospels.

Stockholm ,,

Book of Kells.



No. 567.—The same as No. 566, but with extra Cords at each side (derived from an Eight-cord Plait).

England—

Bewcastle, Cumberland.

Collingham, Yorkshire.

Otley, ,,

No. 566A (no diagram).—Figure-of-eight Knots placed horizontally as in No. 566, but arranged in two or more Vertical Rows.

Cossins.

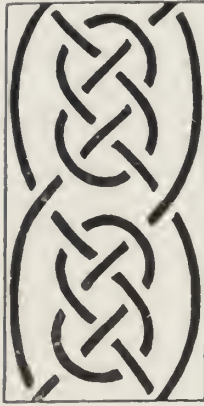
Ireland—Kells.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*

No. 568.—Figure-of-eight Knots placed vertically in a Single Vertical Row (derived from a Four-cord Plait).

Farr.	<i>England—continued.</i>	<i>Wales—</i>
Forres.	Gulval, Cornwall.	Llandough, Glamorganshire.
Aboyne.	Lanherne, „	Margam, „
Cossins.	Brigham, Cumberland.	Llanbadarn Vawr, Cardigan- shire.
Kirriemuir, No. 3.	Glassonby, „	<i>Metalwork—</i>
St Vigean's, No. 1.	Carlisle, „	Bronze mounting, Norway (O. Rygh, No. 627).
Meigle, No. 5.	Workington, „	Bronze plaque, Norway (O. Rygh, No. 628).
St Andrews, Nos. 7 and 15.	St Bees, „	Pin of brooch, Norway (O. Rygh, No. 698).
Inchcolm.	Waberthwaite, „	Soiscel Molaise.
Rothesay.	Irton, „	Hunterston brooch.
Govan, No. 27.	Shelton, Notts.	<i>Bone object—</i>
Coldingham.	Ilam, Staffordshire.	York Museum.
<i>England—</i>	Leek, „	<i>MSS.—</i>
Mears Ashby, Northampton- shire.	Bolton, Lancashire.	Stockholm Gospels.
Lanhydrock, Cornwall.	Warden, Northumberland.	Durrow „
Lanivet, „	Otley, Yorkshire.	Trèves „
Padstow, „	Bedford (St Peter's).	Durham Cassiodorus.
St Neot, „	Crowle, Lincolnshire.	Brit. Mus. (Vesp., A. i.).
Cardynham, „	Lincoln (St Mary le Wig- ford).	
St Erth, „	Kirkby Moorside.	
Waterpit Down, „	Hacknuss, Yorkshire.	
Mawgan in Pyder, „	Melsonby, „	

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*



No. 569.—The same as No. 568, but with extra Cords at each side (derived from a Six-cord Plait).

England—
Workington, Cumberland.



No. 570.—The same as No. 568, but with Double Band (derived from an Eight-cord Plait).

Skinnet.



No. 571.—Figure-of-eight Knots, placed vertically and arranged in two Vertical Rows (derived from an Eight-cord Plait).

Meigle, No. 21.
Arthurlee.
Wales—
Llanynnis, Brecknockshire.

England—
Ramsbury, Wilts.
Saxilby, Lincolnshire.

MSS.—
Brit. Mus. (Vit., F. xi.).

No. 572A (no diagram).—Figure-of-eight Knot arranged in five Vertical Rows.

England—
Dolton, Devonshire.



No. 572.—Figure-of-eight Knots, placed vertically and arranged in three Vertical Rows (derived from a Twelve-cord Plait).

Govan, No. 1.
Jordanhill.

England—
Manby, Lincolnshire.

No. 572B (no diagram).—Figure-of-eight Knot arranged in six Vertical Rows.

England—
Northampton, St Peter's.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*

No. 573.—The same as No. 566, but with two Horizontal Breaks in the Middle of each of the Figure-of-eight Knots, thus forming a series of Twists placed Horizontally (derived from a Six-cord Plait).

Dogtown.

Wales—

Llantwit Major, Glamorganshire.



No. 574.—Combination of a pair of Loops facing upwards and downwards and brought sufficiently near to coincide with each other, thus producing the Twist-and-ring Pattern (derived from a Four-cord Plait, see Nos. 225 and 364).

Bressay.
St Vigean's, No. 10.
Arthurlee.
Whithorn, No. 1.
Govan, Nos. 15, 27, 23 and
31.
Monreith.

Kirriemuir, No. 3.
Meigle, Nos. 4 and 5.
Crieff.
St Andrews, Nos. 7 and
15.
Inchcolm.
Rothsay.

Coldingham.
Forteviot.
Cossins.
Aboyne.
Forres.
Farr.
Liberton.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*

<p><i>England—</i> Desborough, Northampton- shire. Cardynham, Cornwall. Gulval, „ Lanherne, „ Water-Pit Down, „ Pudstow, „ Quethiock, „ Workington, Cumberland. Barnack, Northamptonshire. Heckling, Notts. Humberstone, Lincolnshire. Aycliffe, Durham.</p>	<p><i>England—continued.</i> Beckermot (St John's), Cumberland. St Mary le Wigford. Warlen, Northumberland. Saxilby, Lincolnshire. Manby, „ Darly Dale, Derbyshire. York. <i>Isle of Man—</i> Kirk Braddan. Kirk Michael. Kirk Andreas. Malew.</p>	<p><i>Wales—</i> Llantwit Major, Glamorgan- shire. Llandeuaelog, Brecknock shire. Penally, Pembrokeshire. <i>Ireland—</i> Castle Dermot. <i>Foreign—</i> Brescia, S. Salvatore. Venice (well-head in Museum).</p>
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No. 574a (no diagram).—The same as No. 574, but with an extra cord at each side (derived from a Six-cord Plait). It could also be obtained from No. 536, by converting all the Loops into Rings.

England—
 Workington, Cumberland.



No. 575.—The same as No. 574, but with the Rings double (derived from a Six-cord Plait).

England—
 Aspatria, Cumberland.
 Market Deeping, Lincolnshire.
 Wychffe, Yorkshire.
 Stapleford, Notts.



No. 576.—The same as No. 574, but with Double Bands throughout (derived from an Eight-cord Plait).

Drainie, No. 10.

England—
 Durham Cathedral.
 Hope, Derbyshire.

No. 576a (no diagram).—The same as No. 576, but with the Twist and Ring formed of a triple cord. With variation where the cords cross in the centres of the Rings.

England—
 Ramsbury, Wilts.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*

No. 577.—The same as No. 574, but with two Vertical Rows of Rings (derived from an Eight-cord Plait).

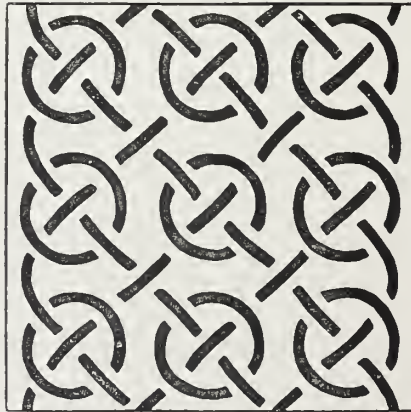


No. 578.—The same as No. 577, but with extra Cords at each side (derived from a Ten-cord Plait). It may be noticed how the decorative effect is here enhanced by the extra cords at each side, which form a sort of border, thus getting rid of the bald appearance presented by No. 577.

Monreith, No. 1.

St Ninian's.
Inchinnan.
Whithorn, No. 11.
Kirkmaiden.
Monreith.
Govan, No. 15.
Kilpatrick.

England—
St Neot, Cornwall.
Copleston, Devon.



No. 579.—The same as No. 574, but with three Vertical Rows of Rings (derived from a Twelve-cord Plait).

Inchinnan, No. 2.
Jordanhill.
Whithorn, Nos. 5 and 8.
Govan, Nos. 1 and 8.

Aboyne.

England—
Stapleford, Notts.

No. 579A (no diagram).—The same as No. 574, but with four Vertical Rows of Rings.

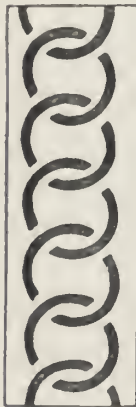
Monreith, No. 2.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*



No. 580.—The same as No. 579, but with Horizontal and Vertical Breaks introduced in the centres of the middle row of Rings, and Spiral Knots substituted for the two outside rows of Rings, thus showing the connection between the different Knots (see Nos. 246 to 247A).

Whithorn, No. 7.



No. 581.—The same as No. 574, but with Horizontal Breaks introduced in the centre of each Ring, thus converting the Twist-and-ring Pattern into a chain of Rings (derived from a Four-cord Plait, see Nos. 224 and 368).

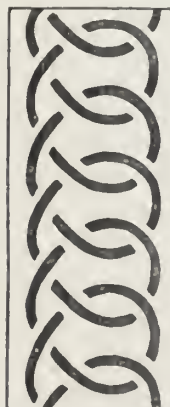
Rothesay.

Wales—

Maen Achwyfan, Flintshire.

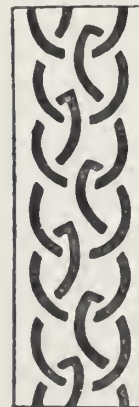
Foreign—

Parenzo.



No. 582.—The same as No. 549, but with the Loops linked together in the same way as the Rings in No. 581 (derived from a Five-cord Plait, see No. 365).

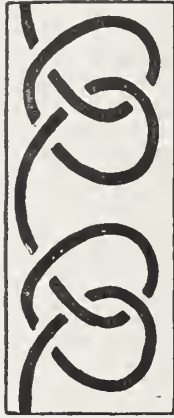
Meigle, No. 25.



No. 583.—A single Cord forming S-shaped Curves and Loops having a right-handed and left-handed Twist alternately, the Loops being linked with the S-shaped Bends.¹

York Museum.

¹ This is altogether a most remarkable pattern, and seems to have been suggested by a chain of rings (No. 581), from which it may be derived by adding arcs of circles alternately on each side. It resembles the stitch used in knitting.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*

No. 584.—A single Cord forming double Loops all facing in the same horizontal direction and linked together in pairs (derived from a Five-cord Plait).

MSS.—

Book of Durrow.



No. 585.—Combination of Loops in pairs all facing to the right (derived from a Five-cord Plait, see Nos. 259 and 361).

Metalwork—

Tara brooch.

No. 585A (no diagram).—The same as No. 585, but with additional Bands at one side (derived from a Six-cord Plait).



No. 586.—Combination of Loops in pairs facing alternately to the right and to the left (derived from a Six-cord Plait, see No. 362).

Thornhill.
Closeburn.

England—Otley, Yorkshire.

MSS.—Brit. Mus. (Harl. 2788).

Metalwork—Bronze mounting, Crieff.



No. 587.—Combination of Loops similar to No. 585, but arranged in a double Row with the Loops in the left-hand Row all facing to the left, and the Loops in the right-hand Row all facing to the right (derived from a Ten-cord Plait, see No. 359).

Whithorn.
Lothbeg.

England—Ripon, Yorkshire.

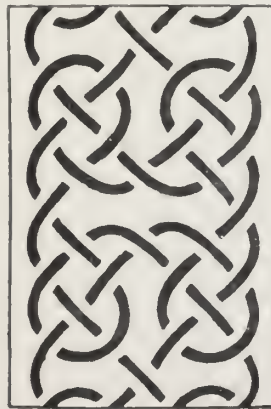
Bone object—Strokestown Crannog.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES--*continued.*



No. 587A.—A Fourteen-cord Plait with Loops arranged facing towards each other along the two Vertical Borders and facing away from each other in the middle of the Horizontal and Vertical Borders, the central portion being varied by breaks unevenly distributed.

St Madoes, No. 1.



No. 588.—Combination of Loops arranged in pairs facing alternately upwards and downwards (derived from an Eight-cord Plait).¹

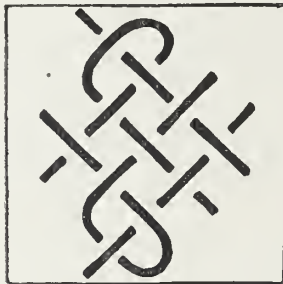
England—

Melsonby, Yorkshire.

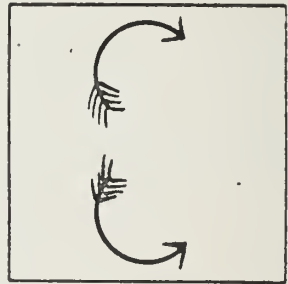
¹ This pattern can be obtained from No. 563 by introducing three horizontal breaks between each horizontal pair of loops.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.**Combinations of Unsymmetrical Loops (Nos. 589 to 625).*

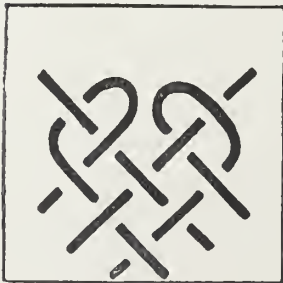
No. 589.—The Loops arranged in groups of four, which may be looked upon as being composed either of two vertical pairs placed as in No. 346A, with two Crossing-points between each pair of Loops;¹ or of two horizontal pairs placed as in No. 346B, with one Crossing-point² between each pair of Loops. In forming



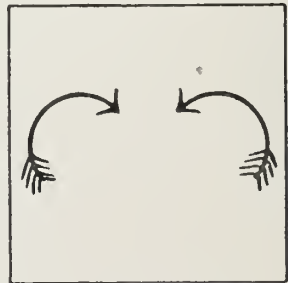
No. 346A repeated.



No. 347A repeated.



No. 346B repeated.



No. 347B repeated.

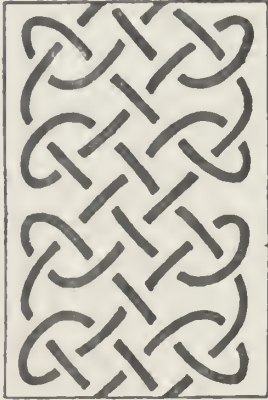
every group of four Loops the pairs are combined with their symmetrical opposites, so that, if the paper on which the pattern is drawn be folded across the middle either horizontally or vertically, the Loops on one half of the sheet will exactly coincide with those on the other half. This pattern is derived from a Twelve-cord Plait, and the groups of four Loops are arranged in two vertical rows.

Govan, No. 1.

¹ The crossing-points are counted along a vertical line passing through the lower of the two points where the diagonal cord cuts the loop.

² The crossing-points are counted along a horizontal line passing through the point where the cord which forms the loop cuts itself. In this and the previous case the number of meshes of the plait between each pair of loops is one more than the number of crossing-points.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued*.



No. 274 repeated.

No. 590.—The Loops combined in groups of four, as in No. 289, except that, instead of there being two Crossing-points between the pair of Loops that were furthest apart, here there is only one (No. 274). The pattern is derived from an Eight-cord Plait, the groups of four Loops being placed with the longer axis horizontal.



No. 591.—The same as No. 590, except that the longer axis of each group of four Loops is placed vertically instead of horizontally (derived from a Six-cord Plait).

England—

St Oswald's, Durham.
Billingham, Co. Durham.

Ireland—

Clonmacnois.
Kilklispeen.

Metalwork—

Ardagh chalice.
Hunterston brooch.

Ivories—

St Genoel's Elderen.

MSS.—

Book of Kells.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*

No. 592.—The same as No. 591, but with extra Cords at each side (No. 275). This pattern is derived from an Eight-cord Plait.

Rosemarkie, No. 1.

England—
Wakefield (York Museum).



No. 275 repeated.



No. 593.—The same as No. 591, but with no Crossing-points between the pairs of Loops which are furthest apart (derived from a Six-cord Plait).

England—
Durham Cathedral.

MSS.—
Brit. Mus. (Vit., f. xi.).



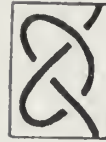
No. 594.—The same as No. 593, but with the longer axis of the group of four Loops horizontal instead of vertical.

Barrochan.
Inchinnan.

England—
Norham, Northumberland.
Durham Cathedral.

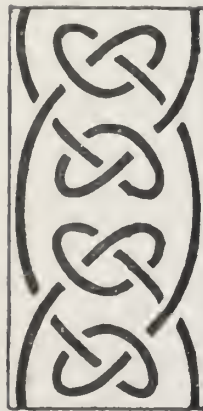
MSS.—
Irish Psalter (Brit. Mus., Vit., f. xi.).

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*



No. 214
repeated.

No. 595.—When the Loops are placed as in No. 346A, and brought one mesh of the Plait closer together than in Nos. 593 and 594, the Loops will cross over each other and the Stafford Knot (No. 214) is obtained, which is capable of all the variations shown on diagrams Nos. 595 to 618. In the first instance (No. 595) the Knots (so called for convenience) are arranged in a single row, alternately facing upwards and downwards. If an attempt were to be made to join each Knot directly on to the next it would be found possible to do so only with half of them, and there would be blank spaces in the pattern between every pair. In order to get over this difficulty, it is necessary to cross the Cords over at each side, then sweep round the Knots with undulating curves and form a twist across the pattern between each Knot. The pattern is derived from a Six-cord Plait.



No. 596.—Here another solution of the difficulty is given, but the pattern, although apparently continuous, is not really so. When examined more closely it will be seen that it is composed of a series of pointed oval rings terminating in a Stafford Knot at each end. The pattern is derived from a Six-cord Plait. I am not aware that either this or the preceding occur in practice. When Stafford Knots are placed horizontally, they always have additional Cords interwoven with the Loops as in Nos. 604 and 605.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*

No. 597.—Stafford Knots arranged in a single row all facing to the right (or all to the left). This pattern is derived from a Three-cord Plait. It is not often used, as its narrow width makes it only suitable for the edges of slabs where the Twist or Plait can be employed with better effect, being more symmetrical in appearance than a pattern which is one-sided.

England—

Hale, Cumberland.
Workington, Cumberland.
Shelton, Notts.

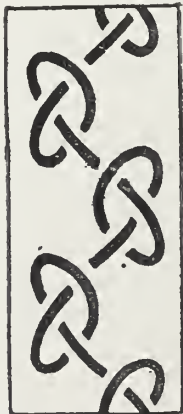
Foreign—

Rome, Porto (A.D. 795–816).
Pola in Istria (9th cent.).



No. 598.—Stafford Knots, arranged in a double row, facing towards each other (derived from a Six-cord Plait). The two rows are entirely separated from each other by a vertical blank space, which detracts from its value for decorative purposes, and this fact perhaps explains its comparatively rare occurrence.

Arthurlee.
Jordanhill.
Govan, No. 14.



No. 599.—Stafford Knots arranged in a double row, alternately facing to the right and to the left (derived from a Five-cord Plait). The chief defect in this pattern is the blank spaces between the Knots, which spoils it for purposes of decoration.

MSS.—

Brit. Mus. (Harl. 2788).

Foreign—

Brescia, S. Salvatore.

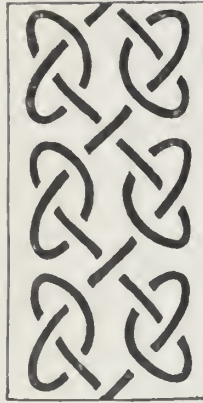


No. 600.—The same as No. 599, but with an undulating Cord traversing the middle (derived from a Six-cord Plait). In the cases mentioned below, where this ingenious adaptation occurs, the undulating Band is the broad body of a serpentine creature, whose tail crosses over the body at regular intervals and forms Stafford Knots in the semi-circular spaces at each side.

England—

Aycliffe, Durham.
Bexhill, Sussex.
Lanherne, Cornwall.
Sancreed, Cornwall.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*



No. 601.—Stafford Knots arranged in a double row, with all the Knots in one row facing in the opposite direction from those in the other row and away from each other (derived from a Six-cord Plait). This is the commonest, and at the same time the most effective, of all the patterns used in Hiberno-Saxon interlaced ornament. It is of convenient width for ordinary borders and panels, without any further alteration, and when it is required to make it wider, it can be modified (1) by increasing the width of the Band and ornamenting the Band with a double or triple-beaded moulding; (2) by doubling the Cord, as in No. 613; (3) by introducing Twists between the two Vertical Rows, as in No. 603; (4) or by interweaving Cords through the Loops, as in No. 611. The pattern has also its simplicity and its symmetrical beauty to recommend it. After hopelessly endeavouring to follow the endless complex windings and interlacings of which much of the interlaced decoration is composed, the brain becomes confused, and it is quite a relief for the eye to be able to rest, if only for a moment, on a design that can be more easily grasped. An interesting survival of this pattern in the twelfth century occurs on the capital of one of the columns of a Norman doorway at Kensworth, in Bedfordshire.

Maiden Stone.
 Glamis, No 1.
 Inchbrayock, No. 2.
 Kirriemuir, No. 1.
 „ No. 3.
 St Vigean's, No. 13.
 „ No. 17.
 Meigle, No. 12.
 Iona, No. 8.
 Govan, No. 28.
 Jedburgh, No. 2.
 Whithorn, No. 6.

England—

Ilkley, Yorkshire.
 Stonegrave, „
 Yarm, „
 Aycliffe, Durham.
 Stainton le Street, „
 Billingham, „
 Jarrow, „
 Hart, „

England—continued.

Durham Cathedral.
 Leek, Staffordshire.
 Ilam, „
 Colsterworth, Lincolnshire.
 Sancreed, Cornwall.
 Lyme Hall, Cheshire.
 Bakewell, Derbyshire.

Wales—

Llandaff, Glamorganshire.
 Llantwit, „
 Llangevelach, Brecon.
 Llanynnis, „
 Nevern, Pembrokeshire.
 Penally.

Foreign—

Reichenau.
 S. Clemente, Rome.

Metalwork—

Hunterston brooch.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*

No. 602.—The same as No. 601, but with the Cords twisted together between each horizontal pair of Knots instead of being simply crossed over (derived from a Six-cord Plait).

Monreith, No. 2.



No. 603.—The same as No. 601, but with a Vertical Row of Twists added in the middle between the two rows of Knots (derived from an Eight-cord Plait).

Ardochattan.

Foreign—
Coire



No. 604.—Stafford Knots, with extra Cords interwoven through the outer part of the Loops (No. 263), arranged in a single row, with the Knots facing alternately upwards and downwards (derived from a Six-cord Plait).



No. 263 repeated.

MSS.—
Stockholm Gospels.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued*.



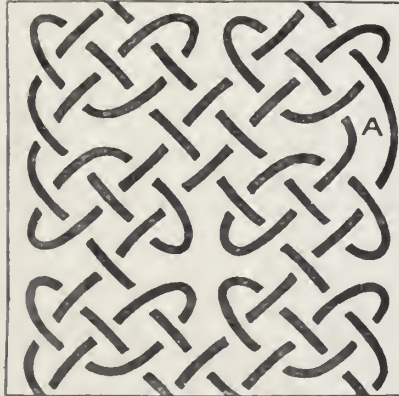
No. 605.—The same as No. 604, but with extra Cords forming undulating curves at each side (derived from an Eight-cord Plait).

St Andrews, No. 1.



No. 606.—Stafford Knots, formed with a double Cord, arranged in a single row, facing alternately upwards and downwards, the outer Cords of the Knots being linked together in the centre (derived from an Eight-cord Plait).

Kilmartin.



No. 607.—Stafford Knots similarly placed to those in No. 604, but arranged in a double instead of in a single row (derived from a Twelve-cord Plait). This is an extremely beautiful pattern, and the cruciform spaces in the centre between the Knots cannot have escaped the notice of the designers. The point is here approached where symbolism and decoration may be said to overlap. It appears, at all events, certain that either these spaces, occurring naturally in the course of designing the interlaced-work, suggested the idea of the cross, or that the symbol of the cross had something to do with the arrangement of the Knots, for on the sarcophagus at St Andrews, on the cross at Stonegrave in Yorkshire, on the cross-slab at Rosemarkie, and in the St Petersburg Gospels the cruciform spaces between the Knots are filled in with actual crosses.

Nigg.

Golspie.

St Andrews, No. 1.

England—

Thornhill, Yorkshire (with variation shown at A).

MSS.—

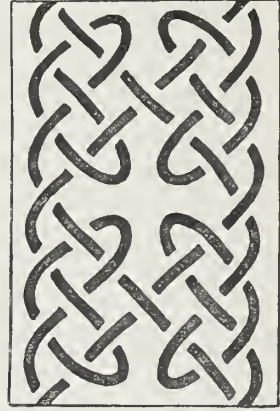
Gospels of Lindisfarne (with three vertical rows).

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*

No. 608.—Stafford Knots, with extra Cords interwoven through the outer part of the Loops, arranged in a single row all facing to the right (or left). This pattern is derived from a Four-cord Plait.



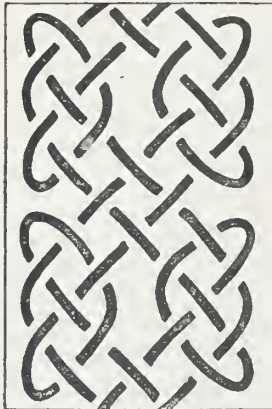
No. 609.—The same as No. 608, but with additional Cords, making undulating curves at one side of the Knots (derived from a Five-cord Plait).



No. 610.—Stafford Knots, with extra Cords interwoven through the outer parts of the Loops, arranged in a double row, with the Knots facing right and left towards each other (derived from an Eight-cord Plait).

MSS.—
St Vast Gospels (with double row).

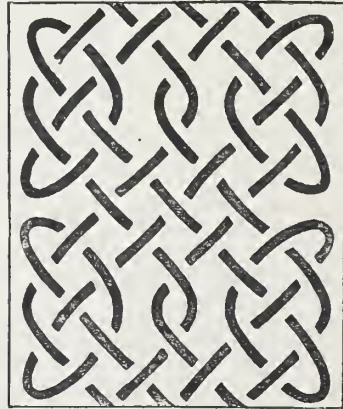
St Vigean's, No. 2.
Woodway.
MSS.—
Cassiodorus on the Psalms (Durham).



No. 611.—The same as No. 610, but with the Knots facing right and left away from each other (derived from an Eight-cord Plait).

Glamis, No. 2.
Govan, No. 1.
Govan, No. 21.

England—
Checkley, Staffordshire.

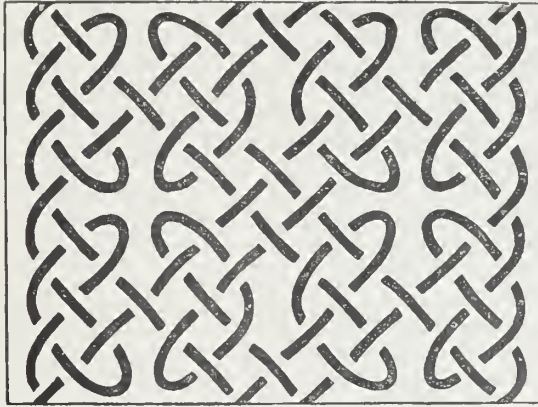


No. 612.—The same as No. 611, but with Twists introduced in the centre between the two Vertical Rows of Knots (derived from a Ten-cord Plait).

England—
Alstonfield, Staffordshire (but with double twist).

MSS.—
Irish Gospels (Corpus Christi College, Cambridge).

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*



No. 613.—The same as No. 610, but with four Vertical Rows of Knots instead of two (derived from a Sixteen-cord Plait).

Nigg.
Brodie.
Glamis, No. 2.
Denino.

Meigle, No. 4.

England—
York Mus. (?)



No. 614.—Stafford Knots, composed of a double Cord (No. 268), arranged in two Vertical Rows, with the Knots facing right and left away from each other (derived from a Twelve-cord Plait).

Glamis.

England—
Stapleford, Notts.
Durham Cathedral.
St Oswald's, Durham.



No. 268 repeated.

England—*continued.*

Tynemouth, Northumberland (with variation shown at A).

MSS.—

Irish Psalter (Brit. Mus., Vit., f. xi.).

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued*

No. 264 repeated.

No. 615.—Stafford Knots, with extra Cords interwoven through the inner part of the Loops and crossing in the centre (No. 264), arranged in two Vertical Rows, with the Knots in each row facing alternately upwards and downwards (derived from a Twelve-cord Plait).

MSS.—Stockholm Gospels (with extra cords at each side).



No. 616.—Stafford Knots of the same kind as those in No. 615, but arranged in a single Vertical Row, with all the Knots facing to the right (or left). This pattern is derived from a Five-cord Plait.

MSS.—

Durham Cassiodorus (in two rows with double cords and extra cords at each side).



No. 617.—The same as No. 616, but with the Knots facing alternately to the right and to the left and overlapping each other (derived from a Five-cord Plait).

England—

Ledsham, Yorkshire.

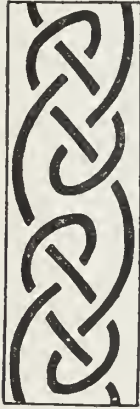


No. 618.—The same as No. 617, but without the Knots being overlapped, and with Cords forming additional Bends and Loops at each side (derived from a Six-cord Plait).

MSS.—

Book of Durrow (Trinity College, Dublin).

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*

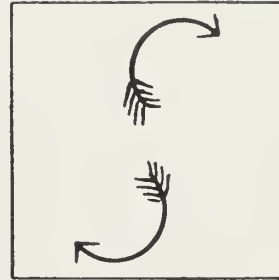


No. 252 repeated.

No. 619.—The Loops placed as in No. 346c, with no Crossing-points (or one mesh of the Plait) between the Loops, thus forming Knot No. 252, which in the first case is repeated in a single Vertical Row, all the



No. 346c repeated.



No. 347c repeated.

Knots being right-handed (derived from a Four-cord Plait). This pattern is a very effective one for decorative purposes, and occurs in work of the best period.

St Madoes, No. 1.

England—

- St Oswald's, Durham.
- Billingham, Co. Durham.
- West Witton, Yorkshire.
- Collingham, Yorkshire.
- Leek, Staffordshire.
- Halton, Lancashire.

Wales—

- Penally, Pembrokeshire.

MSS.—

- Gospels (Stockholm).
- Psalter (Brit. Mus., Vesp., A. i.).
- Bæda (Brit. Mus., Tib., C. ii.).

Metalwork—

- Penannular brooch from Mull (Edinburgh Museum).
- Crozier of St Damhnad Oclene (Dublin Museum).
- St Dympna's crozier.
- Hunterston brooch.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*

No. 620.—The same as No. 619, but with part of the Knots formed with a double Cord (derived from a Six-cord Plait).



No. 621.—The same as No. 619, but with the Knots formed with a double Cord (derived from an Eight-cord Plait)

MSS.—

Book of Durrow (Trinity College, Dublin).



No. 215
repeated.

No. 622.—The Loops placed as in No. 346c, but brought closer together by one mesh of the Plait, so that they touch each other, thus forming Knot No. 215, which is repeated in a single row, all the Knots being left-handed (or right-handed). This pattern is derived from a Three-cord Plait. When the Knots are all right-handed or all left-handed it is necessary to have an awkward curve in the Cord between each Knot, thus to a great extent destroying the value of the pattern for purposes of decoration. The Knot in this pattern is formed of a single Cord, which makes it suitable for use in zoomorphic designs when it is required to interlace the tail of an animal by itself.

MSS.—

Book of Durrow (Trinity College, Dublin).

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*



No. 623.—The same as No. 622, except that the Knots are alternately right-handed and left-handed (derived from a Three-cord Plait).



No. 624.—The same as No. 623, but with the Knots arranged in a double row, the Knots in one row being the symmetrical opposites of those in the other, so that, if the sheet of paper on which they are drawn were to be folded vertically up the middle of the pattern, the Knots on one side would coincide with those on the other (derived from a Six-cord Plait).



No. 625.—The same as No. 623, but with an extra Band interwoven through the Loops (derived from a Four-cord Plait).

Kilpatrick.

England—
Sandbach, Cheshire.
Desborough, Northampton-
shire.

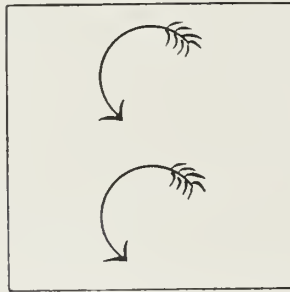
England—

Aycliffe, Co. Durham.
Norham, „

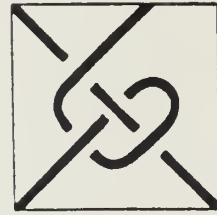
Tullibole.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*

Combinations of Unsymmetrical Loops, as shown in No. 307, having one end of the cord bent spirally through one right angle after forming the loop, and with a second cord passing through the loop diagonally and crossing the first cord in three places (Nos. 626 to 652).



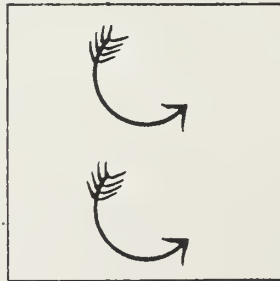
No. 626A.



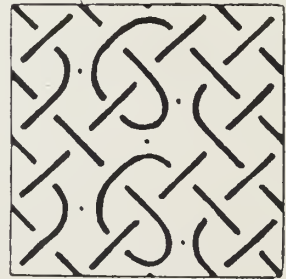
No. 307 repeated.

No. 626.—Combination of Loops in pairs,¹ both right-handed and facing downwards (No. 313A), as indicated by the arrows in No. 626A, arranged in a single Vertical Row with extra Cords at each side (derived from a Six-cord Plait).

Ireland—Monasterboice.



No. 347 repeated.



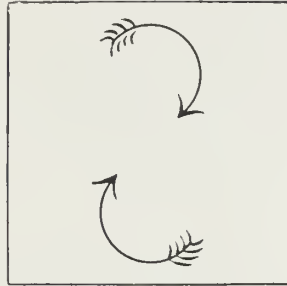
No. 326 repeated.

No. 627.—Combination of Loops in Pairs, as shown in No. 326, placed together in the manner indicated by the arrows in No. 347, and forming a border on each side of a Ten-cord Plait, the Loops on right side being left-handed and facing to the left (No. 313c), and those on the left side being right-handed and facing to the right (No. 313A).

Whithorn, No. 6.

¹ Each loop may be considered to form a pair, either with the one vertically below it or with the one next to it horizontally. In the arrow diagrams the points of the arrows correspond with the pointed ends of the loops, and the feathers with the points where the cords cross over themselves to form the loops.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued*.



No. 628A.



No. 629.—The same as No. 628, but with the Loops further apart.

No. 628.—Combination of Loops in pairs, as indicated by the arrows in No. 628A, in a single Vertical Row, with extra Cords at each side (derived from a Six-cord Plait), one Loop being left-handed and facing downwards (No. 313F) and the other left-handed and facing upwards (No. 313D).

No. 329A (no diagram).—The same as No. 628, but with the Loops still further apart.

England—
Stapleford, Notts.



No. 630.—Combination of Loops in pairs similar to those used in Nos. 628 and 629, but placed horizontally instead of vertically, and closer together, one Loop being left-handed and facing to the right (No. 313E) and the other left-handed and facing to the left (No. 313G). This pattern can be derived from a Nine-cord Plait, but only with a good deal of distortion.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*

No. 630A (no diagram).—The same as No. 630, but with the pattern repeated in a double Vertical Row.

Lethnott.
Ireland—
Monasterboice.

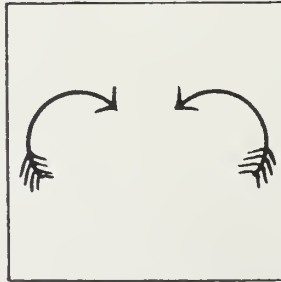
Ireland—*continued.*
Clonmacnois.
Kells.



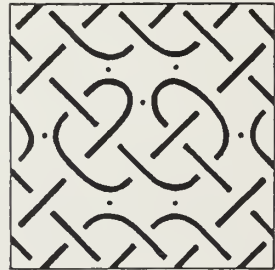
No. 631.—Combination of Loops in pairs similar to those in No. 630, but with the Loops closer together and the symmetrical opposites of those in No. 630 (derived from a Six-cord Plait). The connection between Nos. 630 and 631 will be seen if one of the patterns is reflected in a mirror. In Nos. 630 and 631 the Loops are three meshes of the Plait in length instead of two, and in No. 631 an extra Cord is woven through the Loop.

Ireland—
Clonmacnois.

MSS.—
Book of Kells.



No. 347B repeated.



No. 334 repeated.

No. 632.—Combination of Loops in pairs horizontally as shown in No. 334, and placed together in the manner indicated by the arrows in No. 347B, one Loop being right-handed and facing to the left (No. 313c) and the other left-handed and facing to the right (No. 313E). In this pattern the pairs of Loops are combined horizontally and repeated in a single Vertical Row (derived from a Six-cord Plait).

Rosemarkie, No. 1.
St Vigean's, No. 1.
Carpow.

Ireland—
Clonmacnois.

England—
Collingham, Yorkshire.

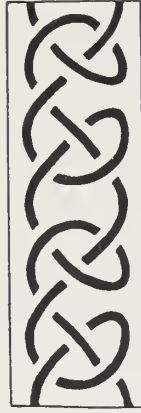
ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*



No. 633.—The same as No. 632, but with every alternate pair of Loops facing in opposite directions (derived from a Six-cord Plait).

MSS.—
St Gall Gospels.

Wales—
Llanbadarn Fawr, Cardigan-
shire.



No. 634.—The pairs of Loops combined as in Nos. 632 and 633, but placed vertically instead of horizontally, and all facing the same way (derived from a Four-cord Plait).

Coldingham.

MSS.—
Dimma's Book.



No. 635.—The same as No. 634, but with the pairs of Loops facing alternately to the right and left (derived from a Four-cord Plait).

Canna.
England—
Sandbach, Cheshire.
Blackwell, Derbyshire.
Norham, Northumberland.
MSS.—
Paris Gospels.

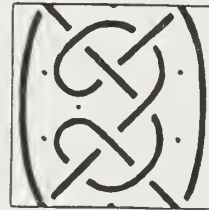


No. 636.—The same as No. 635, but with an extra Cord at each side, as in No. 267 (derived from a Six-cord Plait).

England—
Ilkley, Yorkshire.
Workington, Cumberland.

Ireland—
Monasterboice.
Termonfechin.

MSS.—
British Museum (I.E. vi.).



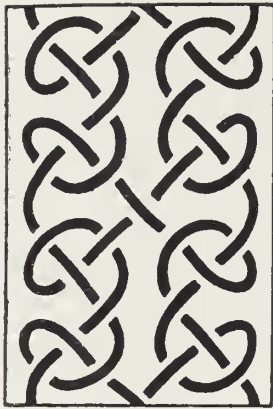
No. 267 repeated.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*

No. 266 repeated.

No. 636A (no diagram).—The same as No. 636, but with an extra Cord at one side only, as in No. 266 (derived from a Five-cord Plait).

Thornhill.



No. 637.—The Loops arranged as in No. 634, but in a double Vertical Row, and with the pairs of Loops in both rows facing in opposite directions, and outwards away from those in the other row (derived from an Eight-cord Plait).

England—

Bewcastle, Cumberland.



No. 638.—The same as No. 637, but with the pairs of Loops in both rows facing in opposite directions inwards towards each other (derived from an Eight-cord Plait).

Farr.

St Andrews, No. 1.

„ „ No. 14.

England—

Sandbach, Cheshire.

Bakewell, Derbyshire.

Knook, Wiltshire.

Ripon, Yorkshire.

Chester-le-Street, Durham.

Jarrow, Durham.

Wales—

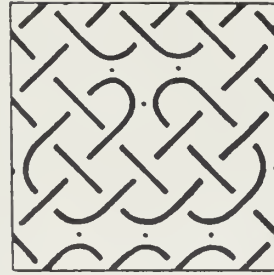
Baglan, Glamorganshire.

MSS.—

British Museum, Psalter (Vesp. A. i.).

„ „ (I.E. vi.).

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*



No. 335 repeated.

No. 639.—The same as No. 633, but with extra Cords woven through the Loops (No. 335) and extra Cords at each side (derived from a Ten-cord Plait).

St Andrews, No. 1.

MSS.—

British Museum, Carlovingian Gospels (Harl. 2788).



No. 640.—The Loops combined as in No. 639, but with two extra Cords woven through the Loops (derived from a Twelve-cord Plait; only half the pattern shown).

No. 641.—The Loops combined as in No. 639, and having an extra Cord woven through each Loop, but with the Loops further apart (derived from a Twelve-cord Plait, only half the pattern shown).

England—
Bewcastle.

England—
Alnmouth, Northumberland.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*

No. 642.—The Loops combined as in No. 639, and having an extra Cord woven through each Loop, but with one end of the Cord which forms the Loop bent round spirally through four more right angles (derived from a Seven-cord Plait).

Aberlemno, No. 2.



No. 643.—The Loops combined as in No. 638, but the Cords all being double (derived from a Sixteen-cord Plait; only half the pattern shown).

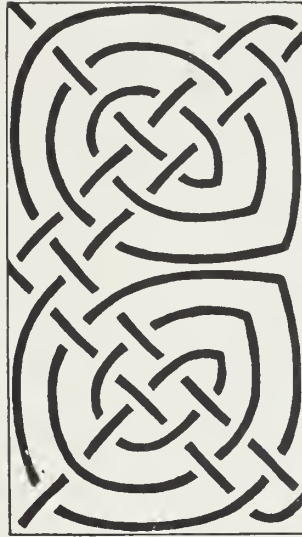
England—
Bewcastle.

MSS.—
Gospels of MacRegol.
Lindisfarne Gospels.

No. 643a (no diagram).—The pairs of Loops combined and arranged as in No. 633, but formed with double Cords throughout.

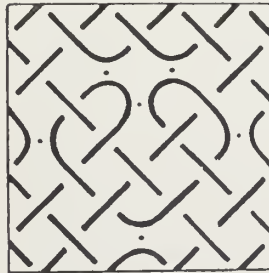
MSS.—
Book of Kells.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued*.

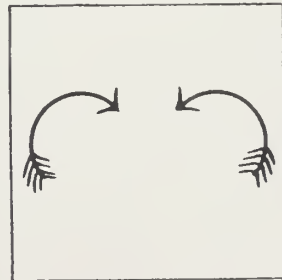


No. 644.—The pairs of Loops combined and arranged as in No. 633, but an extra spiral twist given to one end of the Cord which forms the Loop through eight right angles (derived from an Eighteen-cord Plait). Both this pattern and No. 642 are inserted here instead of amongst the patterns which come afterwards, where the end of the Cord is bent through two right angles after forming the Loop, because the addition of any multiple of 180° of twist (*i.e.*, four or eight right angles) leaves the general appearance of the Knot, which is produced by the relative positions of the Loops, the same, although the number of convolutions of the Cord is greater.

Dunfallandy.



No. 336 repeated.



No. 347B repeated.

No. 645.—Combination of Loops in pairs, as shown in Nos. 336 and 428, and placed together in the manner indicated by the arrows in No. 347B, arranged in a single row facing alternately upwards and downwards (derived from a Six-cord Plait).

MSS.—British Museum, Psalter (Vesp. A. i.), single pair of loops used in initial letters.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*

No. 645A.—The same as No. 645, but with extra Cords at each side forming a figure-of-eight Knot (No. 249) enclosing two pairs of Loops (derived from an Eight-cord Plait).



No. 646.—The same combination of Loops as in No. 645, but arranged in a single Vertical Row all facing to the right (derived from a Five-cord Plait).

Ireland—

Monasterboice.

Isle of Man—

Kirk Onchan.

England—

Glassonby, Cumberland.

MSS.—

Bible of Charles the Bald,

British Museum (Harl. 2788).



No. 647.—The Loops combined and arranged as in No. 646, but in a double row, with the pairs of Loops facing inwards and towards each other (derived from a Ten-cord Plait).

St Vigean's, No. 1.

England—

St Oswald's, Durham.

Alnmouth, Northumberland.

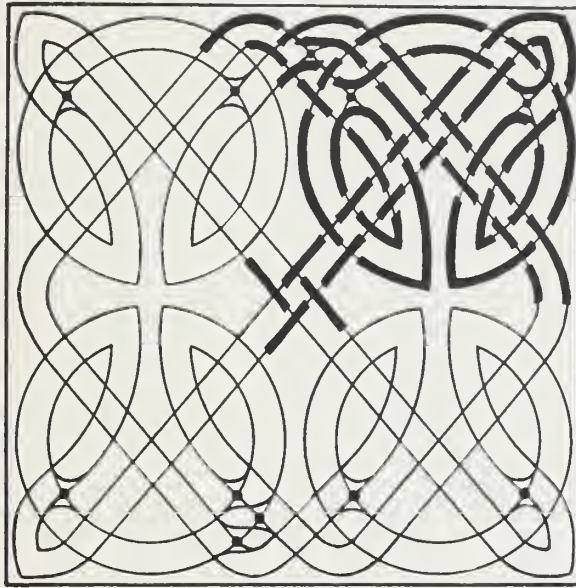
England—continued.

Durham Cathedral.

Wales—

Llanynnis, Brecknockshire.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*



No. 647A.—The same as No. 647, but with a double Cord throughout and Breaks in the places shown.
St Madoes, No. 1.

No. 647B (no diagram).—The same as No. 647, but with four Vertical Rows of combined Loops instead of two.
Glamis, No. 1.

No. 647C (no diagram).—The same as No. 647, but with extra Cords woven through the Loops.
England—
Kirkdale, Yorkshire.



No. 648.—The Loops combined and arranged as in No. 646, but in two Vertical Rows, with the pairs of Loops facing outwards away from each other, and with two of the Cords twisted together at intervals in the middle of the pattern (derived from a Ten-cord Plait).
Golspie.

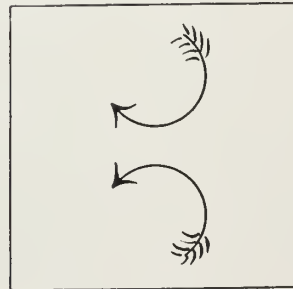
ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*

No. 649.—The same as No. 648, but with the twisted Bands placed in the same horizontal line as the pairs of Loops (derived from a Twelve-cord Plait).

No. 649A (no diagram).—The same as No. 649, but with a double Cord throughout.

MSS.—

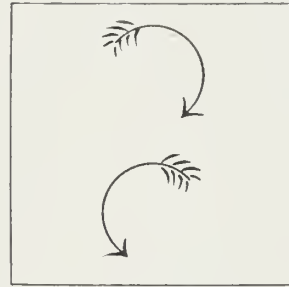
Durham Cassiodorus on the Psalms.



No. 650A.

No. 650.—Combination of Loops in pairs, as indicated by the arrows in No. 650A, repeated in two Vertical Rows, with Cords twisted in the middle between them, the pairs in one row being the symmetrical opposites of those in the other row (derived from an Eight-cord Plait).

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued*.



No. 651A.

No. 651.—Combination of Loops in pairs, placed together in the manner indicated by the arrows in No. 651A, repeated in a single Vertical Row (derived from a Five-cord Plait). If pattern No. 650 be placed horizontally, whilst No. 651 remains vertical, it will then be seen that the Loops occupy the same relative position. This pattern is a very peculiar one, and its lop-sided appearance is due to its being derived from a Plait of an uneven number of Cords.

England—
 Ledsham, Yorkshire.
 Dolton, Devonshire.

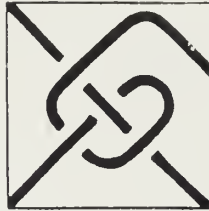


No. 652.—Combination of Loops in pairs, as in No. 648, interwoven with Stafford Knots (No. 262); derived from a Twelve-cord Plait. Strictly speaking, this pattern should have been classified with the combinations of Bends and Loops not of the *same* but *different* kinds, Nos. 665 to 688.

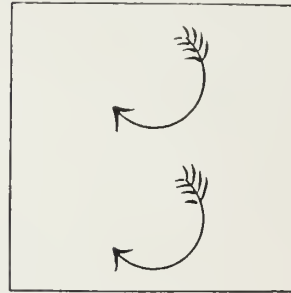
Coldingham.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*

Combinations of Unsymmetrical Loops as shown in No. 308, having one end of the cord bent round spirally through two right angles after forming the loop, and with a second cord passing through the loop diagonally and cutting the first cord in three places (Nos. 653 to 664).



No. 308 repeated.



No. 653A.

No. 653.—Combination of Loops in pairs, both left-handed and facing to the left (No. 313c), placed together in the manner indicated by the arrows in No. 653A, and repeated in a single Vertical Row (derived from a Four-cord Plait).

Farr.
Brodie.
Woodway.
St Madoes, No. 1.
Meigle, No. 25.
St Andrews, No. 15.
Arthurlie.
Wamphray.

England—
Ilkley, Yorkshire.
Otley, „
Dewsbury, „

England—continued.

Melsonby, Yorkshire.
Bromfield, „
Hickling, Notts.
W. Kirkby, Cheshire.
Lanherne, Cornwall.

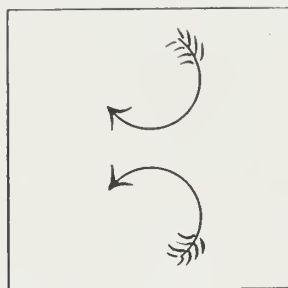
Metalwork—

Mull Brooch.
Norse Brooch (O. Rygh, No. 697).

MSS.—

Stockholm Gospels.

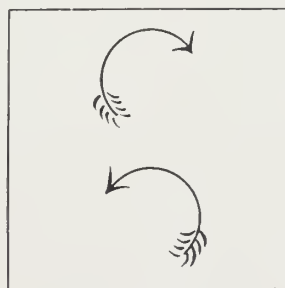
ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued*.



No. 650A repeated.

No. 654.—Combination of Loops in pairs, one left-handed and facing to the left (No. 313g) and the other right-handed and facing to the left (No. 313c), placed together in the manner indicated by the arrows in No. 654A, and repeated in a single Vertical Row (derived from a Four-cord Plait).

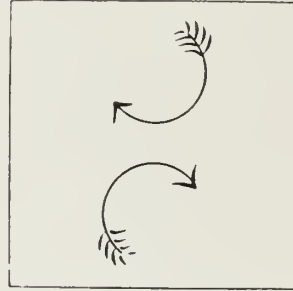
Arthurlee.



No. 655A.

No. 655.—Combination of Loops in pairs, one left-handed and facing to the right (No. 313e) and the other right-handed and facing to the left (No. 313c), placed together in the manner indicated by the arrows in No. 655A, and repeated in a single Vertical Row (derived from a Four-cord Plait).

Ireland—
Moone Abbey.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*

No. 656A.

No. 656.—Combination of Loops in pairs, one left-handed and facing to the left (No. 313G) and the other left-handed and facing to the right (No. 313E), placed together in the manner indicated by the arrows in No. 656A, and repeated in a single Vertical Row (derived from a Four-cord Plait).

Kettins.
St Andrews, No. 1.
Arthurlee.



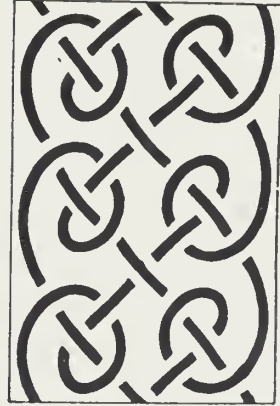
No. 657.—Pattern produced by repeating No. 653 so as to form two Vertical Rows of Loops instead of one (derived from an Eight-cord Plait). The Cords of the Loops in the right-hand Vertical Row make a very ugly curve backwards in order to join on to the Cords of the Loops in the left-hand Vertical Row. This defect can be partly got over by slightly shifting the positions of the Loops in one row relatively to those in the other row, but the pattern can never be made a good one from a decorative point of view. It only occurs in the Isle of Man, the neighbouring county of Cumberland, and at Forres. Its presence would seem to indicate inferior skill in designing interlaced-work, probably at a time when the style was becoming more or less degraded.

England—
Aspatria, Cumberland.

Isle of Man—
Kirk Braddan.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued*.

No. 657A.—The same as No. 657, but with the Loops arranged in four Vertical Rows.
Forres.



No. 658.—Pattern produced by combining No. 653 with its symmetrical opposite with regard to an axis in the plane of the paper, so that, if the paper on which the pattern is drawn were to be folded vertically down the middle, the Loops in the right-hand row would all fall upon the top of those in the left-hand row (derived from an Eight-cord Plait).

No. 658A.—Pattern produced by combining No. 653 with its symmetrical opposite with regard to an axis at right angles to the plane of the paper, *i.e.*, with No. 653 turned upside down (derived from an Eight-cord Plait).

Farnell.
Abercorn.

St Andrews, No. 14.

England—

Durham Cathedral.
Ilkley, Yorkshire.
Thornhill, „
Desborough, Northamptonshire.
Gloucester.

England—

St John's, Beckermeth, Cumberland.
Hawkswell, Yorkshire.
Kirkby Stephen, Westmoreland.

Ireland—

Kells.

Wales—

Silian, Cardiganshire.
Llanfihangel Ystrad, Cardiganshire.

MSS.—

St Gall Gospels.
Lindisfarne Gospels.
Book of Kells.
Gospels of MacDurnan.

Ireland—

Kells.

MSS.—

St Gall Penitential.
Book of Durrow.

Italy—

Baptistery of Cividale, A.D. 737.

Metalwork—

Ardagh Chalice.
Domnach Airgid.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*

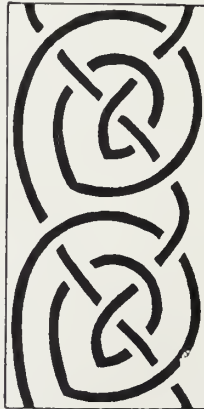
No. 659.—Pattern produced by combining No. 654 with its symmetrical opposite, so as to form two Vertical Rows of Loops instead of one (derived from an Eight-cord Plait).

St Vigean's, No. 1.



No. 660.—The same as No. 659, except that the pairs of Loops in the right-hand row, instead of being exactly opposite those in the left-hand row, are half-way between them (derived from an Eight-cord Plait).

Dyce.



No. 661.—The same as No. 653, but with an extra spiral twist given to the Cord through four right angles, making nine right angles from the commencement.

Monifieth, No. 4.
Meikle, No. 26.
Thornhill.

England—
Ripon, Yorkshire.
Blackwell, Derbyshire.
Stowe Nine Churches, Northamptonshire

England—continued.
Chester-le-Street, Durham.

Ireland—
Clonmacnois.

MSS.—
British Museum, Irish Psalter (Vit., F. xi.).

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued*.



No. 662.—The same as No. 658, but with an extra spiral twist given to the Cord through four right angles.

Nigg.
Strathmartine, No. 3.
Barrochan.
Ireland—
Drumcliff (with cords crossed
over in centre).

England—
Lindisfarne, Northumberland.
Wales—
Penally, Pembrokeshire.

No. 662A (no diagram).—The same as No. 658A, but with an extra spiral twist given to the Cord through four right angles.

Cossins.



No. 663.—The same as No. 653, but with a double Cord throughout.

No. 663A (no diagram).—The same as No. 658, but with a double Cord throughout.
Metalwork—Copenhagen Reliquary.

No. 663B (no diagram).—The same as No. 659, but with a double Cord throughout.
MSS.—
Durham Cassiodorus on the Psalms. | *Metalwork*—
Copenhagen Reliquary.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*

No. 664.—Apparently derived from No. 663 by cutting off some of the Cords and joining them on afterwards to different Cords on the same principle that breaks are made in a Plait.

MSS.—
Book of Durrow.

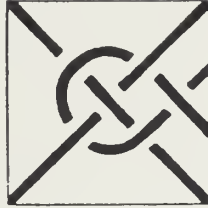
Combinations of Bends and Loops of different kinds with each other, symmetrical with unsymmetrical (Nos. 665 to 677), and unsymmetrical with unsymmetrical (Nos. 678 to 688).



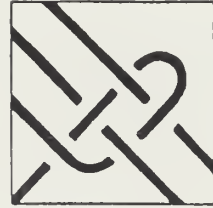
No. 665.—Combination of symmetrical Loop No. 305 with V-shaped Bends (derived from a Five-cord Plait). This pattern ought perhaps to have been classified with No. 585.

Metalwork—
Penannular Brooch, Co. Roscommon.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*



No. 305 repeated.

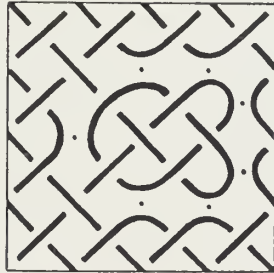


No. 306 repeated.

No. 666.—Combination of a single symmetrical Loop (No. 305) with a pair of unsymmetrical Loops (No. 306), repeated in two Vertical Rows facing outwards and away from each other (derived from a Ten-cord Plait).

MSS.—

Gospels of Lindisfarne.



No. 378 repeated.

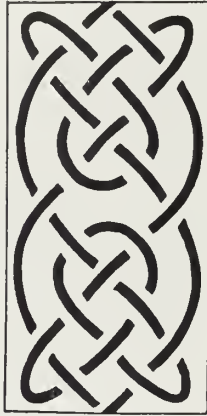
No. 666A (No. 378 repeated).—The same combination of Loops which is repeated in No. 666, used as the termination of patterns derived from a Four-cord Plait, such as No. 568, or on the ends of arms of crosses.

England—

Durham Cathedral.
 Northallerton, Yorkshire.
 Brompton, "
 Stonegrave, "
 Lower Dinsdale, Durham.
 Sockburn, "
 Carlisle Cathedral.
 Ilam, Staffordshire.
 Crowle, Lincolnshire.
 Mawgan-in-Pyder, Cornwall.

Wales—

Llandough, Glamorganshire.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*

No. 667.—The same combination of Loops as in No. 666, but with extra Cords woven through the ends of the unsymmetrical Loops and passing on each side of the symmetrical Loops (derived from a Six-cord Plait).

MSS.—Lindisfarne Gospels.



No. 376 repeated.

No. 668.—Combination of a single symmetrical Loop (No. 305) and a single unsymmetrical Loop (No. 304), as shown in No. 376, repeated in one Vertical Row all facing upwards (derived from a Four-cord Plait).

Farr.
Brodie.

MSS.—

British Museum, Irish Psalter (Vit., F. xi).
Durham Cassiodorus on the Psalms.

No. 668A (no diagram).—The same as No. 668, but with a double Cord throughout and the combinations of Loops facing alternately upwards and downwards.

MSS.—Book of Kells.

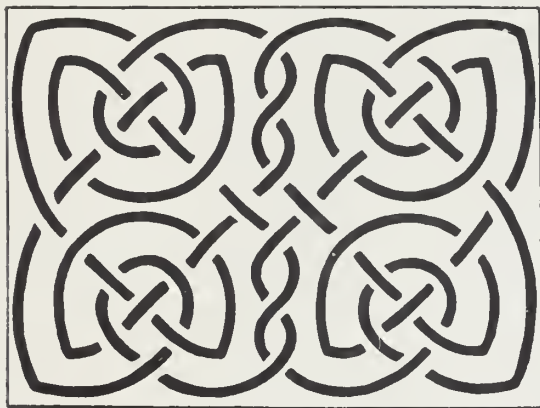
No. 668B (no diagram).—The same as No. 668, but the combinations of Loops repeated in a double instead of a single row (derived from an Eight-cord Plait).

Ireland—Monasterboice.

No. 668c (no diagram).—The same as No. 668B, but with a double Cord throughout.

MSS.—Book of Kells.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*



No. 380 repeated.

No. 669.—Combination of symmetrical Loop (No. 305) with Stafford Knot (No. 262), as shown in No. 380, repeated in two Vertical Rows facing alternately upwards and downwards, and with a pair of twisted Cords introduced in the middle (derived from an Eighteen-cord Plait).

England—

Alnmouth, Northumberland.

Lindisfarne, „



No. 670.—Combination of a single symmetrical Loop (No. 305) with a single unsymmetrical Loop (No. 306), used in pairs as the termination for patterns derived from an Eight-cord Plait in the same way that No. 666A is used to terminate patterns derived from a Four-cord Plait.

Whithorn, No. 3.

Ivories—

Brunswick Casket.

No. 670A.—The same as No. 670, but with a double Cord throughout and combined with Stafford Knots.

MSS.—Lindisfarne Gospels.



No. 671.—The same as No. 670, except that the Cords in the middle run parallel instead of crossing over each other.

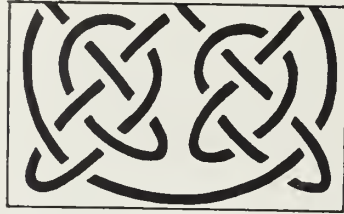
England—

Jarrow, Northumberland.

Bath.

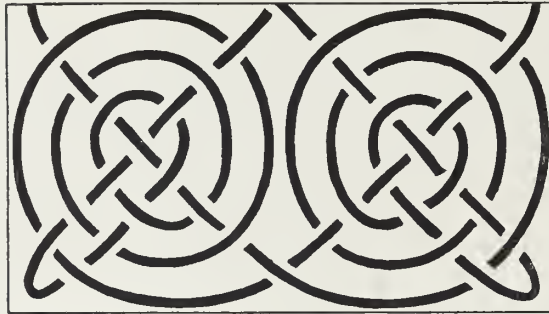
No. 671A.—The same as No. 671, but with a double Cord throughout.

England—Bewcastle, Cumberland.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*

No. 672.—Combination of a single symmetrical Loop (No. 305) with a pair of unsymmetrical Loops as in No. 666A, but with one of the Loops longer than the other and having an additional Cord woven through it, used in pairs as the termination of a pattern (derived from a Ten-cord Plait).

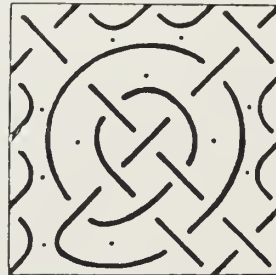
England—Norham, Northumberland.



No. 673.—The same as No. 672, but with one of the Cords twisted round spirally through eight right angles instead of forming one of the unsymmetrical Loops, used in pairs as the termination of another pattern.

St Vigean's, No. 7.

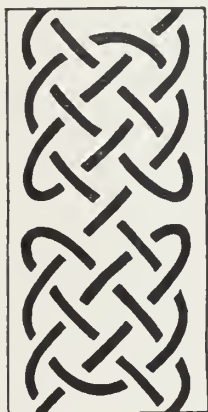
Ireland—Tuam.



No. 383 repeated.

No. 674.—Combination of symmetrical Loop (No. 305) with an unsymmetrical Loop, formed by twisting one end of the Cord spirally round the outside of the symmetrical Loop, as shown in No. 383, repeated in one Vertical Row, the combined Loops facing alternately upwards and downwards.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*



No. 675.—Combination of symmetrical Loops, with U-shaped Bends placed crosswise, as in No. 344A.

England—
Peterborough Cathedral.



No. 676.—Combination of a pair of symmetrical Loops (No. 303), placed as in No. 551, with one end of one of the Cords bent spirally through five right angles round the Loops, repeated in two Vertical Rows.

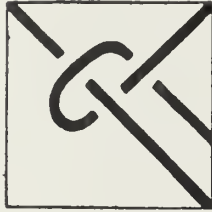
Glamis, No. 2.



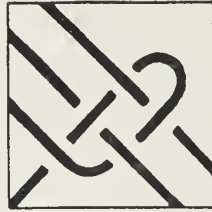
No. 677 —The same as No. 676, except that the relative positions of the combinations of Loops are different.

Meigle, No. 1.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*



No. 304 repeated.



No. 306 repeated.



No. 374 repeated.

No. 678.—Combination in pairs of unsymmetrical Loop No. 307 with an unsymmetrical Loop like No. 306 (but with one end of the Cord bent round spirally through another right angle), as shown in No. 374 (being something between the pairs used in Nos. 636 and 639), arranged in a single Vertical Row with the pairs facing alternately to the right and to the left (derived from a Six-cord Plait).

MSS.—British Museum, Carlovingian Gospels (Harl. 2788).

No. 678A (no diagram).—The same as No. 678, but with a double Cord throughout.

No. 678B (no diagram).—The same as No. 678, but with an extra Cord woven through the larger of the two Loops.

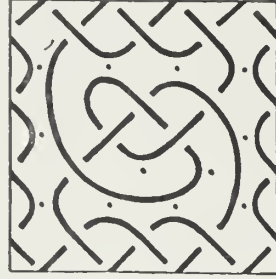
MSS.—Durham Cassiodorus on the Psalms. |

England—Brigham, Cumberland.



No. 679.—The same as No. 678, but with the Loops combined in pairs as in No. 651 (derived from a Six-cord Plait).

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*



[No. 372 repeated.]

No. 680.—Combination of an unsymmetrical Loop (No. 308) with a V-shaped Bend (No. 280), as shown in No. 372, repeated in a single Vertical Row (derived from a Six-cord Plait).

MSS.—
Book of Durrow.



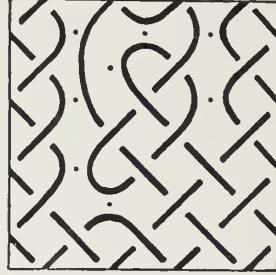
No. 681.—Combination of a large and a small unsymmetrical Loop in pairs, placed as in the Stafford Knot, arranged in a double Vertical Row facing inwards and towards each other (derived from an Eight-cord Plait).

MSS.—
Carlovingian Gospels of St Vast.



No. 682.—Combination of U-shaped Bends, placed crosswise as in No. 344A, and unsymmetrical Loops placed together as in No. 346B, arranged in a single Vertical Row facing alternately upwards and downwards (derived from a Six-cord Plait).

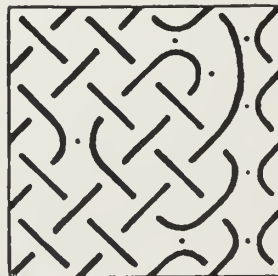
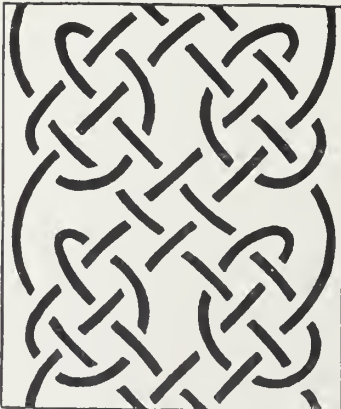
MSS.—
St Gall Gospels, No. 60.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*

No. 373 repeated.

No. 683.—Combination of unsymmetrical Loop No. 304 with unsymmetrical Loop No. 306, placed together in pairs as in No. 373 (being, in fact, a Stafford Knot with an extra Cord woven through one of the Loops only), repeated in a double Vertical Row, with the pairs right and left-handed alternately, and all facing outwards away from each other (derived from an Eight-cord Plait).

England—
Irtton, Cumberland.



No. 388 repeated.

No. 684.—Combination of unsymmetrical Loops similar to those in No. 683, but with two extra Cords, one at right angles to the other, woven through the larger Loop as in No. 388, repeated in a double Vertical Row, the Knots in one row being right-handed and in the other left-handed, but all facing upwards (derived from a Ten-cord Plait).

MSS.—
St Gall Penitential.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*

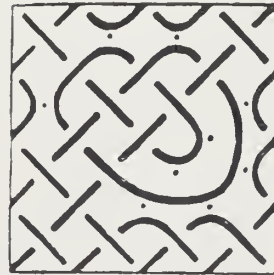


No. 370 repeated.

No. 685.—Combination of a Stafford Knot with unsymmetrical Loop No. 308 placed in pairs, as shown in No. 370, repeated in a double Vertical Row with all the pairs facing upwards, but those in one row being right-handed and those in the other left-handed (derived from a Ten-cord Plait).

St Andrews, No. 14.
Meigle, No. 1 (one pair used terminally).

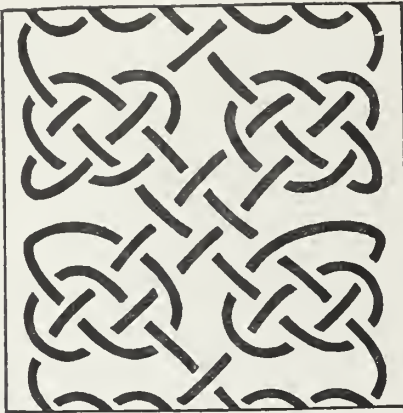
England—
Bakewell.



No. 386 repeated.

No. 686.—Combination of unsymmetrical Loops in pairs, as shown in No. 386, repeated in a double Vertical Row, each pair being alternately right and left-handed and facing in opposite directions (derived from a Twelve-cord Plait).

St Andrews, No. 14.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued*.

No. 687.—Diagram showing the evolution of No. 686 from a Twelve-cord Plait by increasing the number of Breaks.



No. 688.—Combination of unsymmetrical Loops placed together in pairs as shown in No. 389, and repeated in a double row, those in one row being the symmetrical opposites of those in the other (derived from a Twelve-cord Plait). Part of the pairs of Loops used in this pattern are the same as those in No. 686. A very beautiful cruciform space is formed in the middle.

| Barrochan.

This concludes the list of interlaced patterns which can be directly derived from a plait. The geographical distribution of particular patterns, and the frequency with which they occur, is instructive in many ways. The combinations of loops and bents of the *same* kind which are most common are those which can be most easily derived from a three or four-cord plait. The worst class of work, from a decorative point of view, is that in which the breaks in the plait are made without any apparent method, as on many of the Welsh and Cornish crosses. Almost as bad as this are hideously lop-sided and clumsy combinations of unsymmetrical loops of *different* kinds (Nos. 678 to 684), which are characteristic of the Carolingian MSS. The Irish and Kelto-Saxon designers showed their superiority by selecting only those combinations of loops which were effective for purposes of ornament on account of the symmetrical arrangements of the loops and the beauty of the curves formed by the cords. They were especially fond of long sweeping curves and spirals, the adjusting

which to please the eye was soon the means of emancipating them from the plait altogether. The practice of using double, instead of single, cords, and of giving extra spiral twists to the cords had the effect of still further disguising the plait, which is the basis of all these patterns.

As a confirmation of my theory that all interlaced-work may be traced back ultimately to the plait, it is gratifying to learn that Mr Thomas Cooke Trench, D.L., has independently arrived at the same conclusion.¹ He approached the question from quite an opposite side to that of the analyser of ancient ornament, whilst endeavouring to design interlaced patterns for St Michael's Church, Clane, in Ireland. He says: "What I thought beautiful patterns grew up under my hand, but always, just as I was bringing one to a finish, some fatal crossing appeared, and the whole was a wreck." Mr Cooke Trench then goes on to show his method of setting out patterns by taking the plait as the basis and making breaks at certain places. If the so-called knots used in Celtic interlaced decoration had been invented separately, and then built up into a complete design afterwards, the same difficulty would have arisen as that experienced by Mr Cooke Trench, *i.e.*, that a knot which had two loose ends to the cords would not join on to one which had one or three loose ends, and the directions of the two cords might not correspond at the point of junction. Anyone who has attempted to restore the portions of a panel of interlaced-work on an old cross which have been destroyed by weathering or otherwise, will be certain to fail unless he can hit upon the skeleton of the whole pattern.

In sketching a piece of interlaced-work, the eye becomes hopelessly confused in trying to trace the endless convolutions of one or more of the cords, so that the labour of copying it bit by bit is enormous, but once the underlying principle of the plait is grasped, the task becomes comparatively easy.

The regular alternate overlapping and underlapping of the cords, which is so marked a peculiarity of Celtic interlaced-work, can only be accounted for by assuming that the whole was set out on the lines of a plait; otherwise, mistakes in the overlapping would almost certainly occur.

In addition to the above considerations, it is possible to collect

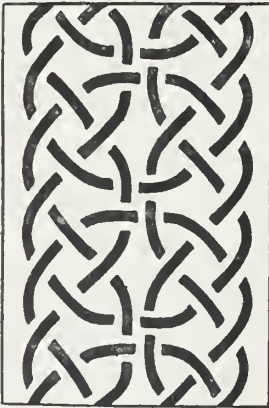
¹ See "Notes on Irish Ribbon Work in Ornamentation," in the *Journal* of the County Kildare Archæological Society, vol. i. (1894), p. 240.

together ancient examples showing every stage of the process of evolution:—(1) the plait; (2) the plait with breaks made at irregular intervals; (3) the plait with breaks made at regular intervals, but so far apart that the plait is still predominant; and (4) the plait with breaks made at regular intervals, sufficiently close together to obliterate the plait.

In some cases, as on the cross at Llanymis in Brecknockshire, and in one of the illuminated Tables of Canons of the Stockholm Gospels, a portion of the pattern consists of a regular plait, whilst the remainder is made up of different knots that can be derived from it.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*

Interlaced-work with cords running horizontally and vertically as well as diagonally (Nos. 689 to 693).



No. 689.—Pattern formed by repetition of No. 392.

Kilchousland.



No. 690.—Pattern formed by repetition of No. 393.

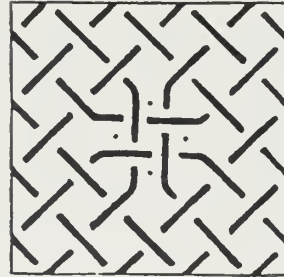
Golspie.



No. 691.—Pattern formed by repetition of No. 394.

Forteviot, No. 1.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*



No. 391 repeated.

No. 692.—Derived from No. 535, by making Breaks in the manner shown in No. 391. It might also have been suggested by pairs of oval Rings placed crosswise and interlaced (No. 489), arranged in two Vertical Rows. If the curves made by the Cords are adjusted so as to become arcs of circles, the pattern will assume the form of a series of Rings having four exterior Loops with pointed ends, as in No. 495, linked together.

No. 692A (no diagram).—The same as No. 692, but with three Vertical Rows of crossed oval Rings instead of two.

Eassie.

No. 692B (no diagram).—The same as No. 692, but with four Vertical Rows of crossed oval Rings instead of two.

Glamis, No. 1.
Logierait.
Forteviot, No. 1.

Foreign—
Lucca, Porch of San Martino.
Metalwork—
Cover of Dimma's Book.

This kind of pattern can be extended so as to completely cover any surface, and may then be looked upon as two series of circles equidistant from each other, placed one on the top of the other and linked together.



No. 693.—The same as No. 692, but with a border at one side as in No. 234.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.**Circular Knotwork (Nos. 694 to 720).*

No. 694.—Pattern formed by repeating No. 408 in two Vertical Rows.

*England—*Dolton, Devon.
Ramsbury, Wilts.No. 694A (no diagram).—The same as No. 694,
but with three Vertical Rows of circular Knots
instead of two.

Cossins.

England—

Ramsbury, Wilts.



No. 408 repeated.

Ireland—

Tuam, Co. Galway.

No. 694B (no diagram).—The same as No. 694,
but with a single Vertical Row of circular
Knots (see Nos. 402 and 402A).*Foreign—*

Grandson, Switzerland.

Como, Italy.

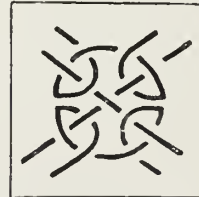
Zürich, Switzerland.

Brescia, S. Salvatore, Italy.



No. 695.—Pattern formed by repeating No. 408A in two Vertical Rows.

Nigg.



No. 408A repeated.

It will be observed that in patterns Nos. 694 and 695 the cords which cross each other in the centre of any one of the circles, when continued, do not pass through the centres of the other circles, but form one of the four loops round the circumference. Consequently, if all the circles are arranged so as to be equidistant from each other, the cords passing through the centres of the circles cannot cross at right angles. This must be borne

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*

in mind when setting out the pattern. In No. 694 the slope of the diagonal cords is represented very nearly by the proportion of three horizontal to four vertical. In No. 695, where the circles are placed with the two breaks in the continuity of the circumference horizontal instead of vertical, the slope is represented by four horizontal to three vertical.



No. 696.—Pattern formed by the repetition of No. 409 (but placed so that the Breaks in the circumference of the inner circle are horizontal instead of vertical) in a single Vertical Row.

Monifieth, No. 4.

Kirkholm.

No. 696A (no diagram).—The same as No. 696, but with the Breaks in the inner Ring vertical instead of horizontal.

Ireland—Monasterboice.

Armagh.

No. 696B (no diagram).—The same as No. 696, but with the circular Knots in a double instead of a single row, and with the Band which forms the outer Ring twisted across in four places.

Foreign—Grado, Dalmatia.



No. 696C (diagram No. 403B repeated).—The same as No. 696, but with extra Cords at each side instead of the outer Ring.

England—

St Oswald's, Durham.

Durham Cathedral.

Alnmouth, Northumberland.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*



No. 697.—Pattern formed by repeating No. 419 in a single Vertical Row.

Ireland—
Boho, Co. Inniskille. 1.



No. 698.—Pattern formed by repeating No. 420 in a double Vertical Row.

Collieburn.



No. 699.—Pattern formed by repeating No. 410 in a double Vertical Row.

No. 699A (no diagram).—The same as No. 699, but with the circular Knots arranged in a single, instead of a double, Vertical Row.

Foreign—
Grandson, Switzerland.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*

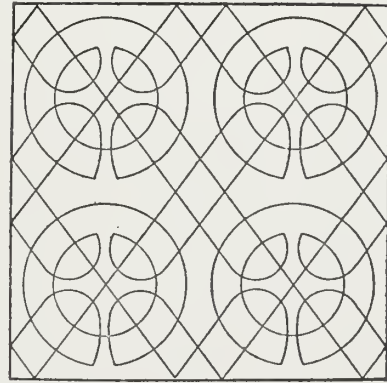


No. 700.—Pattern formed by repeating No. 417 in a double Vertical Row.

Rossie.

|

Strathmartine, No. 5.



No. 701A.

No. 701.—Pattern formed by repeating No. 411 in two Vertical Rows, the Breaks in the outer Ring all facing downwards. The setting-out lines of the pattern are shown on No. 701A.

Gask.
Meigle, No. 4.
Iona, No. 2.

|

Ireland—
Clonmacnois.
Monasterboice.

No. 701B (no diagram).—The same as No. 701, but with the Breaks in the outer Rings of the circular Knots in each Vertical Row facing alternately upwards and downwards.

Ireland—
Tuam.
Monasterboice.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*

No. 701c (no diagram).—The same as No. 701, but with the Breaks in the outer Rings of the circular Knots in one Vertical Row all facing upwards, whilst those in the other Vertical Row all face downwards; and with Cords twisted and joined across in places.

Foreign—Milan, Italy.

No. 701D (no diagram).—The same as No. 701, but with three, instead of two, Vertical Rows of circular Knots.

Ireland—Kells.

No. 701E (no diagram).—The same as No. 701, but with five, instead of two, Vertical Rows of circular Knots.

England—Stapleford, Notts.

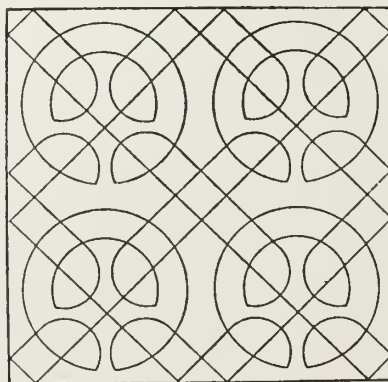
No. 701F (no diagram).—The same as No. 701, but with a single, instead of a double, Vertical Row of circular Knots.

England—

Mears Ashby, Northamptonshire.
Norham, Northumberland.
Gloucester.
Wantage, Berkshire.

Ireland—

Arboe.
Cloumaenois.
Foreign—
Como, Italy.
MSS.—
Bæda, Brit. Mus. (Tib., C. ii.).



No. 702A.

No. 702.—Pattern formed by repeating No. 412 in a double Vertical Row, with the Breaks in the outer Ring all facing downwards. The setting-out lines of the pattern are shown on No. 702A.

Nigg.
Drainie, No. 9.
Forres, Sueno's Stone.

Ireland—
Kells.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued*.

No. 702B (no diagram).—The same as No. 702, but with the Breaks in the outer Ring of the circular Knots in each Vertical Row facing alternately upwards and downwards.

Ireland—
Monasterboice.

MSS.—
Stockholm Gospels.



No. 703.—Pattern formed by repeating No. 415 in two Vertical Rows, with the Breaks in the outer Ring of the circular Knots in each Vertical Row facing alternately upwards and downwards.

Ireland—
Clonmacnois.

No. 703A (no diagram).—The same as No. 703, but with half of each of the inner Rings filled in with a Stafford Knot as in No. 707.

Ireland—
St Breacan's, Aran Mór.



No. 704.—Pattern formed by repeating No. 416 in two Vertical Rows, the circular Knots being placed all facing the same way.

Nigg.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*



No. 705.—Pattern formed by repeating No. 418 in a single Vertical Row, the circular Knots being placed all facing the same way.

MSS.—
Book of Durrow.



No. 706.—Pattern formed by repeating No. 422 in a single Vertical Row, the circular Knots being all placed facing the same way.

England—
Rothley, Leicestershire.



No. 707.—Pattern formed by repeating No. 423 in a double Vertical Row, the circular Knots in each Vertical Row being placed facing upwards and downwards alternately.

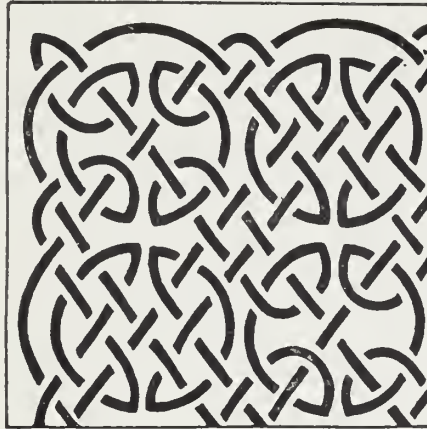
Ireland—
Termonfechin.

MSS.—
Lindisfarne Gospels.

No. 707A (no diagram).—Pattern formed by repeating No. 421 in a double Vertical Row, all the Knots being placed facing the same way, and the Bands of the outer Rings crossed over in places.

Ireland—
Clonmacnois.
Drumcliff.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*



No. 708.—Pattern formed by repeating No. 408 and No. 421 (without the outer Ring) alternately in four Vertical Rows, the whole being surrounded by a border of extra Cords. Only a quarter of the pattern is shown on the diagram.

Nigg.



No. 708A shows how, by making a Horizontal Break in the Stafford Knot, No. 408, which composes the rest of the pattern, may be obtained.



No. 709.—Pattern formed by repeating No. 424 in a double Vertical Row, all the circular Knots being placed facing the same way.

Tarbet, No. 2.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued*.

No. 710. —Pattern formed by repeating No. 427 in a double Vertical Row, all the circular Knots being placed facing the same way.

Rossie.

No. 710A (no diagram).—Pattern formed by repeating No. 426 in a double Vertical Row, all the circular Knots being placed facing the same way, and the Bands of the outer Rings twisted together in three places.

Foreign—

Slab in Birmingham Museum (?) from Italy.



No. 711.—Pattern formed by repeating No. 430 in a single Vertical Row, all the circular Knots being placed facing the same way.

Meikle, No. 5.
England—
Kirkby Hill, Yorkshire.
Ilkley, Yorkshire.

MSS.—
Brit. Mus. (Harl. 2788).

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*



No. 712.—Pattern formed by repeating No. 429 in a double Vertical Row, all the circular Knots being placed facing the same way.

Ireland—
Monasterboice.



No. 713.—Pattern formed by repeating No. 432 in a single Vertical Row, all the circular Knots being placed facing the same way.

England—
Eyam, Derbyshire.



No. 714.—Pattern formed by repeating No. 433 in a double Vertical Row, all the Knots being placed facing the same way.

Collieburn.
Brodie.
Glamis, No. 2.
Gattonside.



No. 715.—Pattern formed by repeating No. 435 in a double Row, the circular Knots in each Vertical Row being placed facing upwards and sideways alternately.

MSS.—
Durham Cassiodorus on the Psalms.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued*.

No. 716.—Pattern formed by repeating No. 434 in a double Vertical Row, all the circular Knots being placed facing the same way.

MSS.—
Book of Durrow.

No. 716A.—A slight variation from No. 716.

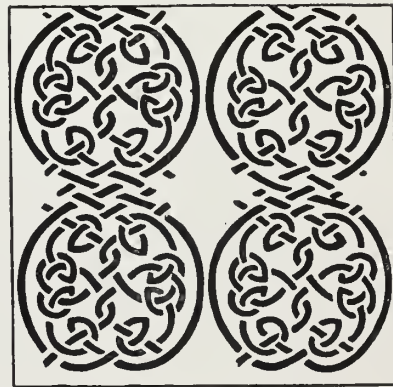
Ireland—

Piece of carved slate in the British Museum from Killaloe, Co. Limerick.



No. 717.—Pattern formed by repeating No. 437 in a double Vertical Row, all the circular Knots being placed facing the same way.

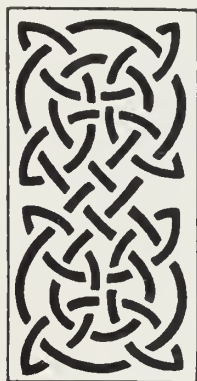
St Madoes, No. 1.



No. 718.—Pattern formed by repeating No. 438 in four Vertical Rows, all the circular Knots being placed facing the same way. The filling in of the spandrils is uncertain.

Rosemarkie, No. 1.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*



No. 719.—Pattern formed by repeating No. 439 in a single Vertical Row, the circular Knots being placed facing upwards and downwards alternately.

England—
Northampton, St Peter's.



No. 720.—Pattern formed by repeating No. 440 in a single Vertical Row, with the circular Knots facing alternately upwards and downwards.

England—
Ilam, Staffordshire.

No. 720A (no diagram).—Pattern formed by repeating No. 441 in a single Vertical Row.

MSS.—Book of Durrow.

Triangular Knotwork, Nos. 721 to 757.



No. 721.—Pattern formed by repeating No. 455 in two Vertical Rows, the Cords being twisted together in the middle. This is the same as No. 554, except that the Cords make angular bends of 45° and 90° instead of being curved.

Lothbeg.



No. 722.—The same as No. 721, but with the Cords twisted together twice instead of once in the middle, and formed into a pair of Symmetrical Loops on each side of the Twists; all the bends of the Cords being angular.

Meigle, No. 24.



No. 723.—The same as No. 722, but with the triangular Loops No. 455 replaced by triangular Knot No. 457.

Woodway.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*

No. 724.—Pattern formed by repeating No. 455 in each of the four triangles of a square divided into quarters by the two diagonals.

Fyvie.

Forteviot, No. 1.

Logierait.

Wales—

Nevern, Pembrokeshire.

MSS.—

Irish Psalter, British Museum (Vit., F. xi.).



No. 725.—The same as No. 724, but with indentations in the triangular Loops at each side.

Ulbster.



No. 726.—Border pattern formed by repeating No. 725, the Cords of the triangular Loops in the middle (which have no indentations) crossed over, so as to make the whole continuous.

The Maiden Stone.



No. 727.—The same as No. 724, but with a square-headed indentation in each of the triangular Loops.

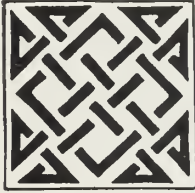
Meigle, No. 5.



No. 728.—A circular Ring interlaced with a cruciform Ring, placed diagonally. Perhaps this should have gone amongst the patterns composed of interlaced Rings, but the angular bends of the cruciform Ring give it more the appearance of triangular Knotwork.

Monymusk.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*



No. 729.—Here the setting-out lines run diagonally and cut each other at right angles, thus dividing the surface into squares occupying the middle, there being triangles all round the border. The triangles are filled in with Loop No. 455, and in each of the squares the Cords form an angular twist.

Ulbster.



No. 730.—The same as No. 729, but covering a more extended surface.

Govan, No. 4.

No. 730A (no diagram).—A modification of No. 730.

MSS.—Book of Durrow.



No. 731.—Pattern formed by repeating triangular Knot, No. 456, in the four quarters of a square.

Logierait.

Forteviot, No. 3.

Meigle, No. 27.

Govan, Nos. 19 and 27.

England—

Britford, Wilts.

Wales—

Penally, Pembrokeshire.

Ireland—

Glendalough, County Wicklow.

Kil Eany, Aran Island.

MSS.—

Irish Psalter, British Museum (Vit., F. xi.).



No. 732.—The same as No. 731, except that the four Bands in the centre of the square are crossed over and made continuous.

Govan, Nos. 6, 9, and 17.

Wales—

Penmon, Anglesey.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*



No. 733.—Pattern formed by repeating triangular Knot No. 457 in the four quarters of a square.



No. 733A.—The triangular Knots here are the same as in No. 733, except that the Cords cross over each other within the Stafford Knot instead of outside it, being in fact the angular form of No. 254.



No. 734.—Pattern formed by repeating triangular Knot No. 458 in the four quarters of a square, but with the four Cords in the centre crossed over.

Ulster.
Burghead, No. 9.
Forteviot, No. 3.
Minningaff.

MSS.—

Irish Psalter, British
Museum (Vit., F. xi.).

England—
Yarm, Yorkshire.

Drainie.



No. 735.—Border pattern formed by repeating triangular Knot No. 458 in a single Vertical Row.



No. 736.—Pattern formed by repeating triangular Knot No. 459 in the four quarters of a square.



No. 737.—The setting-out lines here divide the surface into a single Vertical Row of squares placed diagonally with triangles along each side. The former are defaced in the only example we have remaining and the latter filled in with triangular Knot No. 460.

Meikle, No 26.

Gask.

Rosemarkie, No. 1.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*



No. 738.—Pattern formed by repeating triangular Knot No. 461 in each of the four quarters of a square, divided diagonally.

England—
Britford, Wilts.



No. 739.—Pattern formed by repeating triangular Knot No. 463 in the upper and lower quarters of a square divided diagonally, and triangular Knot No. 467 in the remaining quarters.

Aberlemno.
Meigle, No. 1.



No. 740.—Pattern formed by repeating triangular Knot No. 462 in each of the four quarters of a square, divided diagonally.

Strathmartin, No. 4.



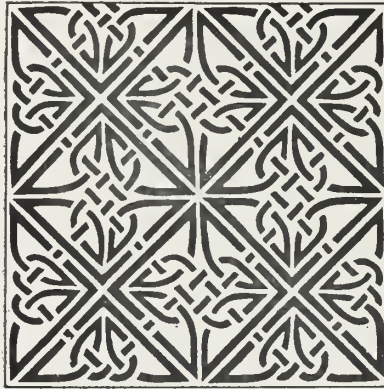
No. 741.—Pattern formed by repeating triangular Knot No. 466 in each of the four quarters of a square, divided diagonally.

Ulster.



No. 742.—Pattern formed by repeating triangular Knot No. 465 in each of the two halves of a square divided diagonally, surrounded by six half squares, two of which are filled in with triangular Knot No. 474, two with triangular Knot No. 472, and one with triangular Knot No. 471.

Rossie.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*

No. 743.—The setting-out lines of this pattern divide the surface by means of diagonals cutting at right angles into squares with triangular half-squares round the edge. The squares are filled in with triangular Knot No. 465 as in No. 742 (thus producing the angular form of Knot No. 275 derived from a Plait) and the Knots filling each square are placed with the bisecting diagonal facing alternately horizontal and vertical. The half-squares round the edges are filled in with triangular Knot No. 467. The pattern¹ produced in this way is capable of covering a surface of any extent and exhibits a great amount of ingenuity of design.

Dunfallandy.



No. 744.—Pattern formed by repeating triangular Knot No. 467 in each of the four quarters of a square, divided diagonally.

Eassie.
Glamis, No. 1.



No. 745.—Pattern formed by repeating triangular Knot No. 468 in each of the four quarters of a square, divided diagonally.

Rossie.

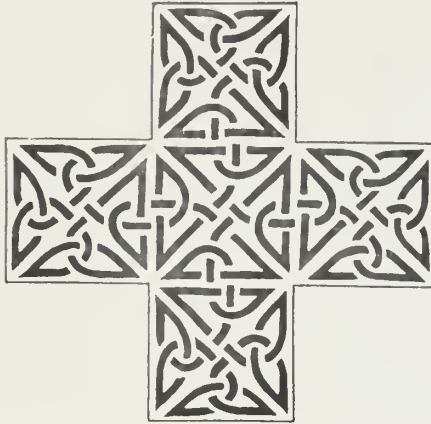


No. 746.—Pattern formed by repeating triangular Knot No. 469 in each of the four quarters of a square, divided diagonally.

England—Ilkley, Yorkshire.

¹ In Stuart's *Sculptured Stones of Scotland* (vol. i. pl. 48), it is shown quite incorrectly.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*



No. 747.—A Cross formed of five squares, each subdivided by diagonals into four triangles. The three exterior quarters of the squares, forming the arms of the Cross, are filled in with triangular Knot No. 457; and the remaining eight quarter-squares in the middle with triangular Knot No. 470, the variations in the positions of the Knot being produced by rotating it round an axis at right angles to the plane of the paper through successive quadrants of a circle.

Ulbster.



No. 748.—A single border pattern formed of squares divided into two halves by diagonals and each half-square filled in with triangular Knot No. 470, the variations in the positions of the Knots being produced as in No. 747. If this pattern is placed so as to slope at an angle of 45° it will be seen that it corresponds with a portion of No. 747.



No. 748A.—The same as No. 748, but with the portions of the Cords which run horizontally omitted. This pattern may also be derived from triangular Knot No. 464.

MSS.—

Book of Kells.

Irish Psalter, British Museum (Vit., F. xi.).

English Psalter (8th Cent.), British Museum (Vesp., A. i.).

England—

Bradford-on-Avon, Wilts.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*

No. 749.—A double border pattern, formed by dividing the two vertical rows of smaller squares in half by diagonals, or the larger squares (which are composed of four of the smaller ones) into eight parts by diagonals and horizontal and vertical lines. Each of the halves of the smaller squares are filled in with triangular Knot No. 470, and all the variations in positions of the pairs of combined Knots are produced by rotation round an axis at right angles to the paper.

MSS.—

Carlovingian Gospels, British Museum
(Harl. 2788).



No. 750.—The same as No. 749, except that the two triangular knots filling each half of the smaller squares are one the symmetrical opposite of the other, as will be seen by folding the paper along one of the diagonals of the larger squares, when the two sides will be found to correspond exactly.

MSS.—

Carlovingian Gospels, British Museum
(Harl. 2788).



No. 751.—Here the pairs of triangular Knots filling the two halves of the upper left-hand and lower right-hand smaller squares are combined in the same way as in No. 747, 748 and 749; but the Knots in the two remaining smaller squares are combined as in No. 750.

MSS.—

English Psalter (8th cent.), British Museum (Vesp. A. i.)

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*

Patterns Nos. 747 to 751 are deserving of special attention. They are so peculiar that it is not probable that they were invented independently in more than one locality, and this being the case a very direct connection is to be traced between the design of the Ulbster stone and the ornamentation of the Carolingian, Irish, and pre-Norman English MSS. I am not aware that this class of pattern occurs on any of the early sculptured stones in Ireland, Wales, or in England (except at Bradford-on-Avon, Wilts).



No. 752.—A single border pattern formed of a series of half-squares, filled in with triangular Knot No. 471.

Rossie.



No. 753.—Pattern formed by repeating triangular Knot No. 471 in the four quarters of a square, divided diagonally.

Monifieth, No. 2.

Aboynæ.

MSS.—

Irish Psalter, British Museum (Vit., F. xi.).



No. 754.—Pattern formed by repeating triangular Knot No. 475 in the four quarters of a square, divided diagonally.

Strathmartine, No. 4.



No. 755.—Pattern formed by repeating triangular Knot No. 474 in the four quarters of a square, divided diagonally.

St Vigean's, No. 19.

Logierait.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*

No. 756.—A square panel divided by diagonals and horizontal and vertical lines into 16 half-squares, the 8 round the edge being filled in with triangular Knot No. 456, and the 8 in the middle with the same Knot distorted by making one of the loops of the Stafford Knot round whilst the other is pointed.

St. Vigeans, No. 17.



No. 757.—A square panel similarly subdivided to No. 756, the half-squares round the edge being filled in with triangular Knot No. 473, and the central portion being very irregular but having some points in common with No. 765 (at Aberlemno) hereafter described.

Rossie.

Circular and triangular combined Knot-work (Nos. 758 to 765).

No. 758 (No. 500 repeated).—In dealing with interlaced-work generally (p. 201) this and No. 759 were classed with patterns composed entirely of interlaced-rings, but in arranging the patterns so as to bring together those which are most nearly allied to each other, their proper place seems to be here.

England—

Durham Cathedral.
St. Oswald's, Co. Durham.
Aycliffe, Co. Durham.
Chester-le Street, Co. Durham.



No. 759.—(No. 499 repeated).

England—

Gainford, Co. Durham.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*



No. 760.—The same as No. 758, but with an additional circular Ring in the centre and four symmetrical Loops in the outer Ring.

England—
Bexhill,¹ Sussex.



No. 761.—The same as No. 758, but with the four Cords not crossed over in the centre and Cords forming the eight Loops with pointed ends twisted together in four places.

Foreign—
Rome, Sta. Maria Trastevere.



No. 762.—Derived from No. 758 by adding an inner Ring and introducing Twists and Loops in places.
Rossie.



No. 763.—A square panel divided by diagonal, horizontal and vertical lines into eight triangles, each of which is filled in with a more or less irregular piece of interlaced-work, so that the portions in each half of the four squares are symmetrical with regard to the other. The four spandrils are filled in with triangular Knot No. 465.

Kettins.

¹ Curiously enough another of the patterns on this stone occurs also at Aycliffe, Co. Durham (see No. 600), apparently indicating that there must have been some connection between Sussex and Northumbria in Saxon times.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*

No. 764.—Pattern formed by repeating Knot No. 476 two-and-a-half times in a single vertical Row, the spandrils being filled in with Knot No. 450. The piece of interlaced-work filling the four quadrants of the circle is the same in all cases, except in the left-hand quadrant of the Circle at the top and the right and left-hand segments of the semi-circle at the bottom. In the former there is a slight variation in the crossing of the Cords, and in the latter Spiral Knot No. 247 is introduced.

Meigle, No. 1.
Eassie.



No. 765.—Pattern of the same type as No. 764, consisting of three circular triangular Knots repeated in a vertical Row; the spandrils being filled in with Knot No. 451. The pieces of interlaced-work which fill the upper and lower quadrants of all three circles are the same. In the case of the upper quadrant of the middle circle two of the Cords cross over into the adjoining quadrant on the left; and in the case of the lower quadrant of the bottom circle two of the Cords cross over into the adjoining quadrant on the right. The interlaced-work in the left-hand and right-hand quadrants of the upper circle differs from each other, but corresponds with those in the circle next below it. The interlaced-work in the right and left-hand quadrants of the bottom circle differs from each other and from all the rest. Thus five distinct designs of interlaced-work are used for filling the twelve quadrants; one design being repeated 6 times; two others twice, and the remaining two only used once. It is clear therefore that, notwithstanding the apparent complication of the arrangement of Cords, the design was not arrived at by any hap-hazard method, but was all carefully thought out beforehand. This may fairly lay claim to be the most elaborate interlaced pattern in sculptured stone-work that has come down to us.

Aberlemno.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*

Interlaced-work composed of Circular, Oval, and Looped Rings
(Nos. 766 to 776).



No. 766 (No. 489 repeated).

Meigle, No. 6.
Inchinnan, No. 1.
Govan, No. 4.
Penpont, Nos. 1 and 2.

England—

Durham Cathedral.
Lyme Hall, Cheshire.
Lanherne, Cornwall.
Waterpit Down, Cornwall.
Quethioc, ,,
St. Breage, ,,
St. Cleer, ,,
St. Columb Major, ,,
St. Teath, ,,

Wales—

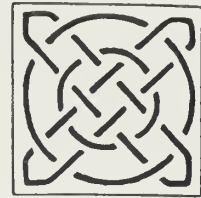
Llandough, Glamorganshire.
Margam, ,,
Llantwit Major, ,,
Nevern, Pembrokeshire.
Carew, ,,
Meifod, Montgomeryshire.



No. 767 (No. 490 repeated).

England—

St. Just in Penwith, Cornwall.
St. Neot, Cornwall.



No. 768 (No. 491 repeated).

Govan, No. 7.



No. 769 (No. 492 repeated).

England—

Jarrow, Northumberland.



No. 770 (No. 494 repeated).

Fowlis Wester (?)

England—

Norham, Northumberland.



No. 771 (No. 495 repeated).

England—

Hawkser, Yorkshire.

Wales—

Maen Achwynfan, Flintshire.

Meifod, Montgomeryshire.

Ivories—

Chessmen from Island of Lewis.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*

No. 771A (no diagram).—The same as No. 771, but without the circular Ring, and having triquetra Knots in the four spandrels.

England—Yarm, Yorkshire.

No. 771B (no diagram).—The same as No. 771A, but without the triquetra Knots, and having the Loops round instead of pointed.

Wales—

Llanhamllech, Brecknockshire.

Bridgend, Glamorganshire.



No. 772 (No. 496 repeated).

England—

Chester-le-Street, Co. Durham.

Bromfield (St Mary's), Cumberland.



No. 773 (No. 498 repeated).

England—

Durham Cathedral.



No. 774 (No. 497 repeated).



No. 774A (No. 488A repeated).

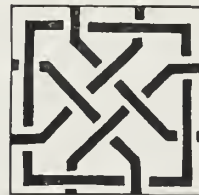
Enamel on Metalwork—

Cross of Cong.



No. 775.—A double circular Ring used to emphasise the point of intersection of two sets of double Cords crossing at right angles.

Barrochan.



No. 776.—A square Ring used for a similar purpose.

Iona, No. 6.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*

Interlaced-work specially adapted for filling Circular or Annular Spaces (Nos. 777 to 794).



No. 777.—A circular Ring with four exterior Loops (No. 484) distorted so as to fit into a circular space.

Skinnet.
Meigle, No. 24.



No. 778.—The same as No. 777, but with the addition of a circular Ring. This should be compared with No. 771 where the same combination of Rings is adapted to a square shape by making the ends of the four Loops pointed.

England—
Aycliffe, Co. Durham.



No. 779.—The same as No. 777, but with square-headed indentations in each of the four Loops.

Meigle, No. 24.



No. 780.—The same as No. 731, but adapted to the circular instead of to the square shape.

Meigle, No. 19.

Wales—
Pen-Arthur, Pembroke-shire.

Ireland—
Clonmacnois.
(Slab of Odran Hau,
Eolais, A.D. 994).



No. 780A.—The same as No. 780, but with the circle divided into three instead of four segments.

Wales—
Llanynnis, Brecknockshire.



780B.—A combination of No. 777 with No. 780.

Ireland—
Tynan.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*

No. 781.—The same as No. 733, but adapted to the circular instead of to the square shape.

. St Vigean's, No. 13.

MSS.—

Stockholm Gospels.

Ireland—

Clonmacnois (Slab of Maelfinnia, A.D. 991).



No. 782.—A circular Ring having eight exterior Loops combined with No. 780.

England—

Hartshead, Yorkshire.



No. 783.—Four quadrants of a circle filled in with spiral Loop No. 247, all left-handed.

St Vigean's, Nos. 1 and 9.

Ireland—

Termon Fechin, Co. Louth.

MSS.—

Book of Durrow.



No. 784.—The same as No. 783, except that the circle is divided into three segments instead of four, and one of the spiral Loops is right-handed and the other two left-handed.

Logierait.



No. 785.—A ring with four exterior Loops, as in No. 777, but with a Stafford Knot (No. 262) formed in each of the Loops.

Golspie.



No. 786.—A Circle divided into four quadrants, each filled in with a piece of interlaced-work, consisting of a pair of symmetrical Loops with two Cords passing through them and crossing at right angles (No. 361), and a pair of unsymmetrical Loops having pointed ends. The four spandrils are filled in with triangular Knot No. 467. Notice the remarkable similarity of this pattern adapted to a circular shape to No. 763 (at Kettins) adapted to a square shape.

Glamis, No. 2.

St Vigean's, No. 7.

Rossie.

ANALYSIS OF INTERLACED-WORK WITH THE LOCALITIES—*continued.*



No. 787.—A three-cord Plait formed into a wreath filling an annular space, there being 6 crossing points in the exterior row. This pattern may be otherwise looked upon as consisting of three oval Rings interlaced with each other.

Bressay.

No. 787A.—The same as No. 787, but with 9 crossing points in the exterior row.

Metalwork—

Bronze Mounting, Norway (O. Rygh No. 620).

No. 787B.—The same as No. 787, but a four-cord Plait with 13 crossing points in the exterior row.

Metalwork—

Bronze Mounting, Norway (O. Rygh, No. 625).



No. 788.—An annular wreath formed of four figure-of-eight Knots (No. 249).

Isle of Man—

Chapel on Calf of Man.



No. 788A.—An annular wreath formed of four figure-of-eight Knots (No. 249), but arranged radially instead of tangentially, as in No. 788, and with a symmetrical Loop between each Knot.

Leatherwork—

Satchel of Book of Armagh.



No. 788B.—An annular wreath formed of the twist-and-ring pattern (No. 225), but with the Rings linked together as in No. 224, there being six Rings.

Leatherwork—

Satchel of Book of Armagh.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*

No. 789.—An annular wreath formed of two Knots No. 265.

Dupplin.
Eilan Mor.
Kilmartin.

Ireland—

Clonmacnois, Kings Co.
Termon-Fechin, Co. Louth.

MSS.—

Book of Kells.



No. 790.—An annular wreath formed of four Knots No. 265.

Ireland—

Tullylease (Grave slab of St. Berechtir
A.D. 839).



No. 791.—An annular wreath composed of a single Row of symmetrical Loops No. 295, with an extra Cord on the inside of the wreath; there being 9 Loops. Compare with Nos. 259 and 586.

Nigg.



No. 792.—The same class of pattern as No. 791, but with two concentric rows of Loops No. 295; there being six Loops in the inner row and twelve in the outer row.

Hilton of Cadboll.



No. 793.—An annular wreath composed of six spiral Loops No. 247, being pattern No. 242 adapted to a circular shape. Now, since the two sides of No. 242 are not symmetrical with regard to a vertical axis passing down the centre (as is the case, for instance with No. 226, the circular form of which we have in No. 788), it is possible to produce two variations of the circular form of the pattern from the single straight form No. 242, according to whether the right or the left side of No. 242 is kept on the outside of the ring space. In the present case, No. 792, the right side of No. 242 is on the outside of the ring.

England—Lastingham, Yorkshire.



No. 242 repeated.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*

No. 793A (no diagram).—The same as No. 793, but with eleven spiral Loops instead of six.

Metalwork—

Bronze Mounting, Norway (O. Rygh, No. 630).

No. 793B (no diagram).—The same as No. 793, but with nine spiral Loops, all facing the same way, except one which faces the opposite way.

Metalwork—

Monymusk Reliquary.



No. 793c.—The same as No. 793, but with the left side of No. 242 on the outside of the ring space, there being also nine spiral Loops instead of six. It will be noticed that the undulating curves made by the Cords on the left side of No. 242 are double the amplitude of those on the right. In the process of bending the straight pattern so as to adapt it to the circular shape, the amplitude of the curves on the inside of the ring space is reduced, thus making the amplitude nearly the same on both the inside and the outside in No. 793. But when the right side, where the amplitude is least, is placed on the inside (as in No. 793c) the amplitude is made still smaller, the Cords making quite an acute angle at the bend.

*Metalwork—*Monymusk Reliquary.

No. 793D (no diagram).—The same as No. 793c, but with ten spiral Loops instead of nine.

*Metalwork—*Rogart brooch.



No. 793E.—The same as No. 793D, but with an additional spiral twist given to the Loops, which are 10 in number.

Metalwork—
Lough Erne Reliquary.



No. 793F.—An annular wreath composed of six Knots No. 370.

Metalwork—
Bronze Mounting, Norway
(O. Rygh, No. 622).



No. 794.—A circular Ring looped on the exterior in four places and distorted interlaced with a pair of oval Rings also distorted.

Bressay.

ANALYSIS OF INTERLACED-WORK WITH THE LOCALITIES—*continued.*

Interlaced-work specially adapted to fill spaces of various shapes bounded by two or more circular arcs or straight lines (Nos. 795 to 809).



No. 795.—Vesica-shaped space bounded by two circular Arcs and filled in with a circular Ring interlaced with a figure-of-eight Ring.

Bressay.
Pabil.



No. 796.—Vesica-shaped space filled in with a circular Ring, a figure-of-eight Ring, and a distorted oval Ring, all interlaced.

Pabil.



No. 797.—Vesica-shaped space filled in with a figure-of-eight Knot (No. 249).

Bressay.



No. 798.—Triangular space filled in with a triquetra Knot (No. 485A).

Maiden Stone.

Aberlemno, No. 2.

Cossins.

St. Vigean, Nos. 4 and 10.

Meigle, No. 1 (used as symbol).

Dupplin.

St. Madoes, No. 2.

St. Andrews, No. 2.

England—

Durham Cathedral.

Hawsker, Yorkshire.

Brompton, Yorkshire.

Aspatria, Cumberland.

Lyme Hall, Cheshire.

Chester, St. John's.

Leek, Staffordshire.

Shelton, Notts.

Lanivet, Cornwall.

Padstow, "

Quethiock, "

St. Breward, Cornwall.

St. Neot, "

Tintagel, "

St. Tudy, "

Hackthorne, Lincolnshire.

Wales—

Llantwit Major, Glamorganshire.

Margam, "

Llanfrynach, Brecknockshire (used as a symbol).

Laugharne, Carmarthenshire.

Penally, Pembrokeshire.

Meifod, Montgomeryshire.

Isle of Man—

Kirkmichael.

Chapel on Calf of Man.

Douglas.

Ireland—

Clonmacnois (sepulchral slab).

Killamery, Co. Kilkenny (sepulchral slab).

Metalwork—

Lough Erne Reliquary.

Crozier of St. Fillan.

Crozier of Tedavnet.

Killamery Brooch.

Snaesen Brooch (O. Rygh, No. 697).

Glasgow Brooch.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued*.

No. 797A (no diagram).—The same as No. 797, but with a double instead of a single Cord.

Metalwork—

Crozier of Tedavnet.

Bronze Mounting from Athlone.

Bone—

Strokestown Crannog (Mus. R.I.A.).



No. 798B.—Derived from No. 798A by making a double point to the triquetra Knot at each of the three corners.

Bone—Locality unknown (Mus. R.I.A.).

With the exception of the instances at Meigle and at Llanfrynach, in Brecknockshire, the triquetra is used for purely ornamental purposes, and there is not the least foundation for the theory that it is symbolical of the Holy Trinity. If the triquetra knot had ever any symbolical significance at all it was probably in pagan times and in that case it probably had some affinity with the *triskele* or three legs of the Isle of Man, which is only another form of the *swastika*, and signifies the apparent rotary motion of the sun round the earth.¹ The shape which the triquetra assumes on the coins of the Danish King Anlaf of Northumbria is certainly as suggestive of the *triskele* as of a three-cornered knot.

For purposes of decoration the triquetra knot is obviously most admirably suited for filling in any triangular space, whether bounded by straight lines or arcs of circles, which may occur in the design. In sculptured stonework the triquetra knot is often used on the expanded ends of cross-arms (especially in Cornwall) and on the lipped ends of the roofs of coped stones. Some of the crosses on the early sepulchral slabs in Ireland, and a few of the free standing crosses at Brompton, Hawkser, and other places in Yorkshire, have the shaft of the cross terminating in a triangular point,² which is usually filled in with a triquetra knot. This knot is also not unfrequently seen on the expanded ends of Celtic penannular brooches, and on the bulbous portions of the heads of Celtic croziers.

¹ See Count Goblet D'Alviella's *Migration of Symbols*, p. 63.

² Perhaps intended to represent the pointed end of a processional Cross which was sometimes like that of a crozier.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*

No. 799. — Triangular space filled in with a triquetra Knot and a circular Ring interlaced.

Metalwork—
Crozier of St. Fillan.



No. 800. — Derived from No. 799 by making two breaks at the points where the circular Ring cuts the upper Loop of the triquetra Knot.

Metalwork—
Crozier of St. Fillan.



No. 801. — Triangular space divided into three smaller triangles by lines radiating from a central point to the three corners, each of the triangles being filled in with a Stafford Knot. Compare with No. 780A.

Ireland—
Glendalough (Hiberno-Romanesque Church).



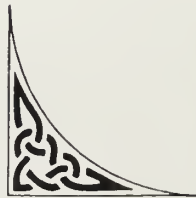
No. 801A. — The same as No. 801, but with 3 pairs of unsymmetrical Loops, having pointed ends, added in the centre.

Bone—
Locality unknown (Mus. R.I.A.).



No. 802. — Spandril bounded by two straight lines at right angles to each other and a circular arc; filled in with a triquetra Knot.

Maiden Stone.



No. 803. — Spandril of same shape as No. 802; filled in with a further development of No. 799.

Maiden Stone.



No. 804. — Spandril of same shape as No. 802; filled in with another modification of No. 799.

England—
Hartshead, Yorkshire.

ANALYSIS OF INTERLACED-WORK, WITH THE LOCALITIES—*continued.*



No. 805.—Spandril bounded by one convex and two concave circular arcs, filled in with a modification of No. 803.

Canna.



No. 806.—Space bounded by one convex and three concave circular arcs, filled in with the same pattern as No. 795, but with the round Ring made of horse-shoe shape.

Bressay.



No. 807.—Space of same shape as No. 806, filled in with a plain circular Ring and a circular Ring having two exterior Loops, distorted, both interlaced.

Bressay.



No. 808.—The same as No. 807, but with the rings interlaced differently.

Bressay.



No. 809.—Space bounded by three concave circular arcs and one diagonal straight line, filled in with a piece of interlaced-work composed of three unsymmetrical Loops, one of which has a pointed end.

Hilton of Cadboll (Z and double disc symbol).

Ornamental Angles of Frames of Panels and V-shaped Rods of Symbols (Nos. 810 to 815), many found in the Celtic MSS., but rare on the Monuments.



No. 810.—Symmetrical Loop.
Skinnet.



No. 811.—Oval Ring.
Nigg.



No. 812.—Triquetra Knot.
Nigg.



No. 813.—Four-Cord Plait placed diagonally.
Skinnet.



No. 814.—Triquetra Knot with extra Loop.
Rosemarkie, No. 1.

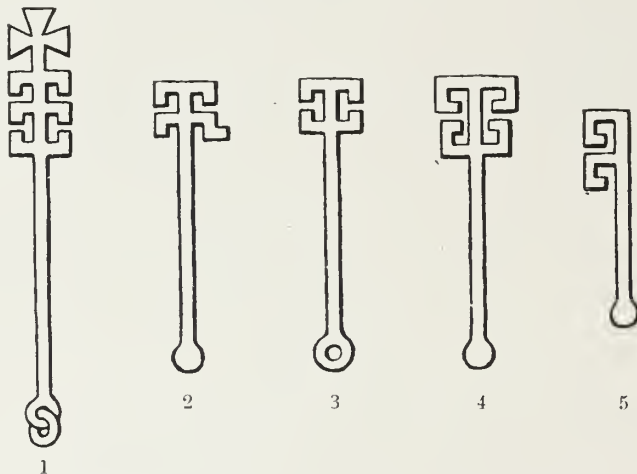


No. 815.—Modification of No. 814.
Rosemarkie, No. 1.

KEY-PATTERNS.

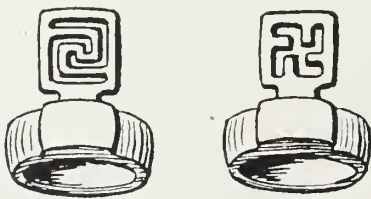
The term key-pattern is a convenient one by which to describe certain geometrical designs composed of straight lines, or, more strictly speaking, narrow straight bars making successive angular bends and interlocked with other similar bars, but leaving a space or background between the bars, thus resembling the L and T shaped slots cut in an ordinary key to allow it to pass the wards of the lock.

In the Anglo-Saxon illuminated MSS.¹ and sculptures,² and on the Bayeux Tapestry,³ the keys of the period are conventionalised so as to form an ornamental pattern of the kind mentioned.



1. Æthelwold Benedictional. 2. Donation of King Edgar. 3. Daglingworth, Gloucestershire.
4. Caedmon's "Paraphrase." 5. Bayeux Tapestry.

Some of the Roman keys attached to finger rings have piercings forming a key-pattern. One found at Rome (Drury Fortnum Coll.) is illustrated in the *Archaeological Journal* (vol. 29, p. 307), and there is another very like it in the National Museum of Antiquities of Scotland which was found at Wick.



Roman Finger Ring Keys in Drury Fortnum Collection and Edinburgh Museum of Antiquities.

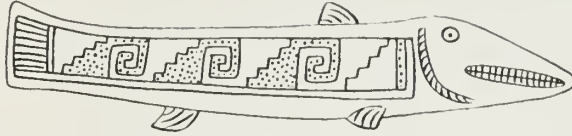
Another name for a key-pattern is the Greek fret. This class of ornament is

¹ Caedmon's "Metrical Paraphrase of the Scriptures" (*Archaeologia*, vol. xxiv. pl. 58); Benedictional of Æthelwold (*Archaeologia*, vol. xxiv. pl. 80); Donation of King Edgar to Winchester, Brit. Mus. Vesp. A. viii. i.o.; (Westwood's *Miniatures*, pl. 47.)


² Daglingworth, Gloucestershire.

³ *Vetusta Monumenta*, vol. vi. pl. 6.

largely made use of in the art of many countries, more especially in that of China, Japan, Mexico, and Peru; but in each case the



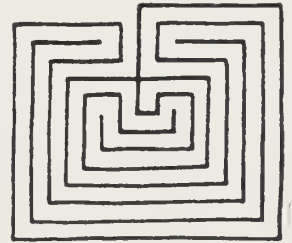
Vessel in form of a fish ornamented with step and key-pattern, from Peru, now in the British Museum.

patterns have been developed in a way characteristic of the locality. In China and Japan the Swastica symbol  forms the basis of many of the designs. In Mexico and Peru a peculiar kind of key-pattern suggest-

ing the idea of a flight of steps  seems to predominate, and

some of these may have arisen from the mechanical necessities of the process of weaving textile fabrics.

It is just possible that some connection may exist between the labyrinths represented on the coins of Gnossus in Crete and the Greek fret. Labyrinths are not uncommon on the pavements of mediæval Cathedrals,¹ where they were used for devotional purposes; and the last survival of these curious constructions is to be found in the landscape gardening of the Renaissance period, the Maze at Hampton Court being a familiar instance.



Labyrinth on coin of Gnossus in Crete.

The special peculiarities of the Celtic key-patterns arise from two causes (1) the predominance given to the margin, and (2) the placing of the setting-out lines diagonally with regard to the margin. This will be referred to subsequently.

Looked at from a purely geometrical standpoint, a key-pattern may be said to consist of a surface entirely covered with black lines on a white ground, drawn in such a way that between each black line there is a white line separating it from the next one to it; one set of lines being generally con-

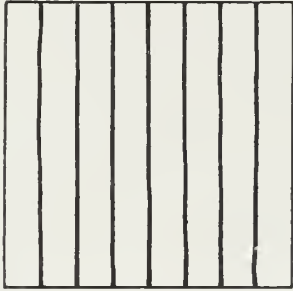
¹ See Bishop Trollope in *Assoc. Architectural Societies Reports*, vol. iv. p. 251, and *Archæol. Jour.*, vol. xv. p. 218; Amé's *Carrelages Émaillé*, p. 47; *Dict. of Architecture of the Arch. Pub. Soc.*, vol. v. p. 53; and Gailhabaud's *Architecture*, vol. i.

tinuous and capable of being drawn without removing the pen from the paper: whereas the other set, which forms the ground, is discontinuous or broken.

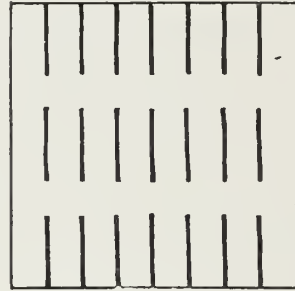
Each key-pattern has a reciprocal, or converse, produced by interchanging the black and the white so that what was before black on a white ground becomes white on a black ground. The breadth of the black and white lines should be nearly equal.

Perhaps this will be rendered more intelligible by taking a glance at some of the different ways in which it is possible to cover a surface with straight lines.

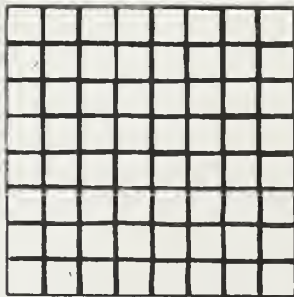
The simplest arrangements of straight lines bounded on the square system are as follow :—



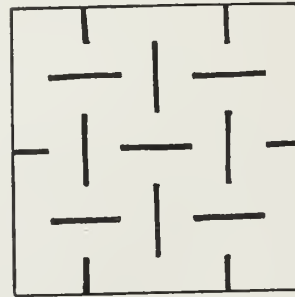
No. 816.



No. 817.



No. 818.



No. 819.

(a) Stripe-pattern, consisting of one set of parallel straight lines (No. 816).

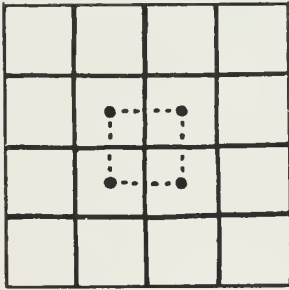
(b) Broken stripe pattern, where portions of the lines are isolated (No. 817).

(c) Reticulated pattern, composed of two sets of parallel straight lines,

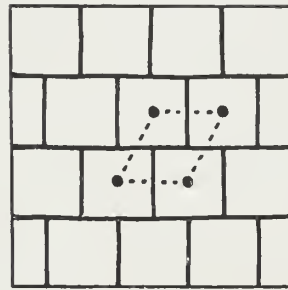
which cross at right angles, and thus form a network covering the whole surface (No. 818).

(d) Broken reticulated pattern, where portions of the lines are isolated, so as to resemble a woven fabric (No. 819).

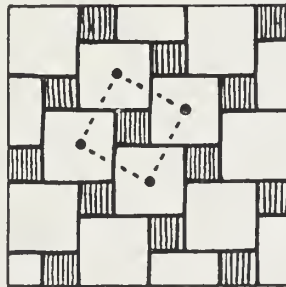
The isolated lines in patterns No. 817 and No. 819 need not necessarily be exactly opposite each other, for their positions may be varied by shifting them in rows either horizontally or vertically. The nature of this shifting process may be realised by imagining the squares upon which the pattern is set out to be movable like wooden bricks (Nos. 820 to 822).



No. 820.



No. 821.



No. 822.

Now, if each horizontal row of squares or bricks be pushed forwards with a sliding motion upon the row below, through a distance less than the length of one of the sides of the squares, the bricks will break joint as in No. 821. If a similar operation be performed with each row that was formerly vertical, but is now diagonal, the arrangement shown in No. 822 will be obtained. The centres of a set of four adjoining squares are indicated in each case to show how their relative positions have been altered.

All geometrical patterns, founded on the square system, are derived from one of these three diagrams. In order to ascertain to which of them any particular pattern belongs, it is only necessary to observe the relative positions of the centres of the figures which are repeated to form the pattern.

In actual practice the designer does not require to use the more complicated forms of setting out diagrams shown on Nos. 821 and 822, as he can attain the same end more simply by sub-dividing the squares in No. 820 into smaller squares, which enable him to shift the positions of his lines to any desired extent either horizontally or vertically. Another convenient method is to found the pattern on setting-out lines drawn through the centres of the squares, as indicated by the dotted lines in Nos. 821 and 822.

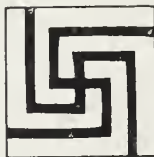
All key-patterns are ultimately reducible to rows of isolated straight lines placed in their proper position in the way just explained. These form the basis of the pattern and the spaces between them are filled in with other straight lines arranged spirally, or branching out from a stem-line, thus:—



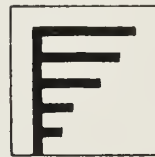
No. 823.



No. 824.



No. 825.




No. 826.

No. 823. Single straight-line spiral. No. 825. Quadruple straight-line spiral.
 No. 824. Double ,, ,, ,, No. 826. Stem-line with branches.


It is the straight-line spirals and stem-lines with branches which give key-patterns their peculiar appearance, and the possible ways of distribut-


ing them over the surface to be decorated are governed by the same laws that apply to all other kinds of geometrical ornament. For each key-pattern composed of straight line spirals connected by straight lines placed

thus  there is a pattern composed of curved spirals connected



by curved lines shaped thus  and  is equivalent to



 and  to  . When we come to deal with curved



spiral ornament it will be seen that the lines connecting two spirals having opposite directions of twist must be  shaped, and those connecting

spirals having the same direction of twist must be  shaped. The


same rule holds good with the  and  in key-patterns. In

designing curved spiral-work the centres of the spirals are arranged first, and they are then connected by  or -shaped lines

according to the directions of the twists of the spirals. In studying the construction of key-patterns we shall reverse the process, by beginning with  and -shaped connections, and filling in the straight-



line spirals afterwards. The number of possible key-patterns depends on the number of ways that a surface can be covered with  s and  s, and



this again depends on the variations capable of being produced in the arrangement of isolated straight lines, as already explained.



The  s and  s are derived from the isolated straight lines by

adding other straight lines at both ends bent at right angles; either both to the right, or one to the right and the other to the left.

On the direction of these lines depends the direction of the twist of the straight-line spirals.

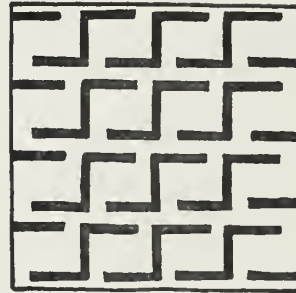
In key-patterns the  s are almost always placed in pairs, back to back, so as to form  s. It will therefore be sufficient for our purpose

to give the different ways of covering a surface with  s and  s, which are as follows, the arrangement of isolated lines from which they are derived being given in each case.

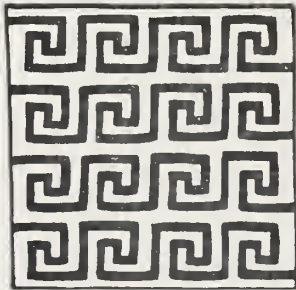
In No. 827A the  s placed thus 



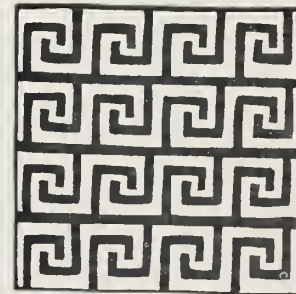
No. 827.





No. 827A.



No. 827B.



No. 827C.

In No. 828A  s placed thus 



No. 828.



No. 828A.





No. 828B.



No. 828C.

In No. 829A  s placed alternately, thus:—

 and 



No. 829.



No. 829A.



No. 829b.



No. 829c.

In No. 830A the  s placed thus



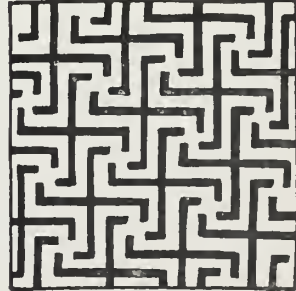
No. 830.



No. 830a.





No. 830b.



No. 830c.

The arrangement of the isolated straight lines in this case resembles that of the threads in twill weaving, in which the warp threads pass over and under two woof threads instead of only one, as in plain weaving.

In No. 831A the  s placed thus 



No. 831.





No. 831A.

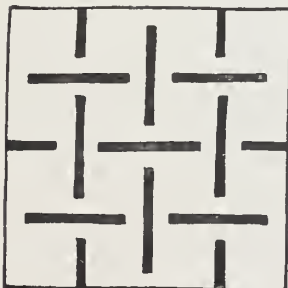


No. 831B.



No. 831C.

In No. 832A the  s placed thus 



No. 832.





No. 832A.





No. 832B.



No. 832C.

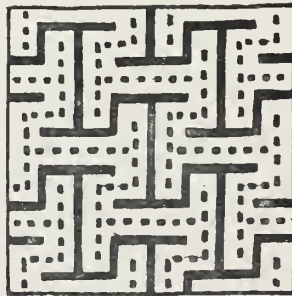
The following key-patterns are derived from the above  and  patterns; and by the side of each is shown the reciprocal pattern produced by reversing the black and the white, so that the black lines on a white background are changed into white lines on a black background.

The numbers correspond in each case. Thus No. 827 is the arrangement of isolated straight lines; No. 827A the  pattern; No. 827B the key-pattern; and No. 827C the reciprocal key-pattern, in which the black and white are reversed.

The key-pattern No. 832D is derived from No. 832B by removing the centre bars of the . It occurs on a Roman pavement.



No. 832D.



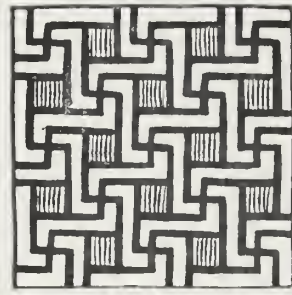
No. 832E.

The key-pattern No. 832E is derived from No. 832B by omitting one

of the lines forming the straight-line spirals which connect the ends of the **I**s. It occurs on a metal casket of the 13th century made at Mosul, in the British Museum.



No. 830D.



No. 830E.

The key-patterns Nos. 830D and 830E are of the same type as No. 830B. They occur on Roman pavements at Newton St. Loe and at Wellow, near Bath.



No. 832F.

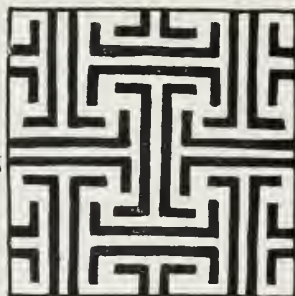
Key-pattern No. 832F is of the same kind as No. 832B except that the **I**s are placed diagonally with regard to the margin, whilst the straight-line spirals remain parallel to it, and triangles are added to the **I**s. It occurs on the Tope of Sarmath in India ¹

¹ Fergusson's "Indian Architecture," p. 68

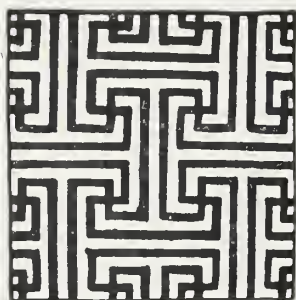
Some of the key patterns used on Roman pavements and in Japanese and Chinese art are derived from an arrangement of isolated straight lines like those already described, but with the lines double instead of single, having the appearance of a woven fabric composed of double threads, as shown in Nos. 833 to 835c.



No. 833.



No. 833A.



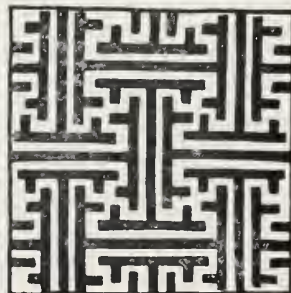
No. 833B.



No. 833C.



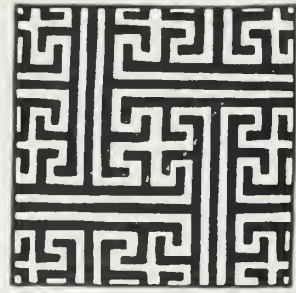
No. 834B.



No. 834C.



No. 835b.



No. 835c.

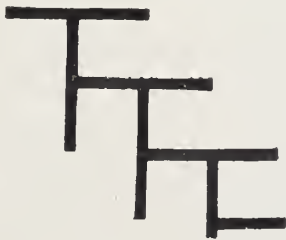
The step-pattern (No. 836) forms the basis of another class of key-patterns, which are derived from it by extending the faces of the steps,



No. 836.

and then adding straight-line spirals branching out on each side of the zig-zag line that forms the steps.

This may be done in two ways, as shown on Nos. 837 to 838c; the reciprocal patterns, where the black and white lines are interchanged, being given as well on Nos. 837c and 838c.



No. 837.



No. 837A.



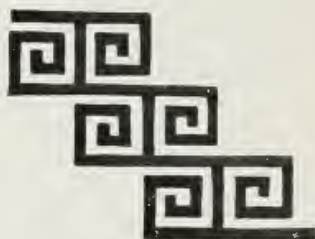
No. 837B.



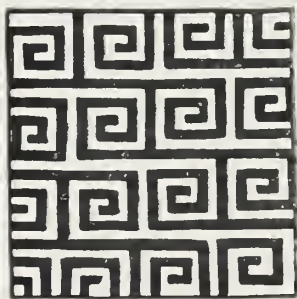
No. 837C.



No. 838.




No. 838A.



No. 838B.

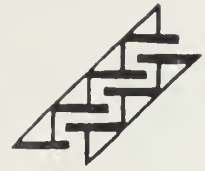


No. 838C.

These latter should be compared with the  key-patterns Nos. 828c

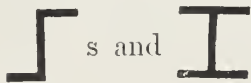
and 829c, which are the same, except that the straight-line spirals are double in the former instead of single. When the spirals are double, the reciprocal pattern differs from the original one, but when the spirals are single they are both the same.

Square key-patterns are generally placed with the setting-out lines parallel to the margin, but on the south cross at Clonmacnoise there is an instance of the pattern being placed diagonally (No. 839).



No. 839.

Nos. 840 to 858 are examples of the different kinds of straight-line spirals that can be used to form key-patterns by filling in the square spaces between the



\square s and \square s of the patterns from which they are derived. The variations are produced (*a*) by increasing the number of lines that meet in the centre of the spiral, (*b*) by increasing the number of bends at right angles made by the lines, and (*c*) by altering the direction of the twist of the spiral.



No. 840.



No. 840A.



No. 841.



No. 841A.

No. 840 is a single straight-line spiral and 840A its reciprocal.

No. 841 is a double straight-line spiral and 841A its reciprocal.



No. 842.



No. 843.

Nos. 842 and 843 are double straight-line spirals with ornamental centres formed by a vesica shaped figure, or two triangles filled in with black or colour.



No. 844.



No. 844A.



No. 845.



No. 845A.

Nos. 844 to 858 are quadruple straight-line spirals, the variations being produced by reversing the direction of the twist of the spiral at intervals.



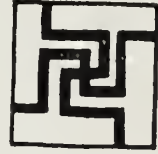
No. 846.



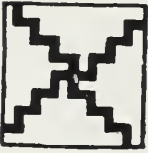
No. 846A.



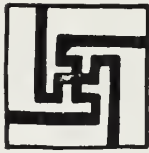
No. 847.



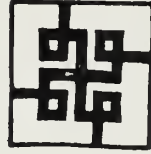
No. 848.



No. 849.



No. 850.



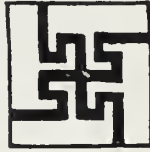
No. 851.



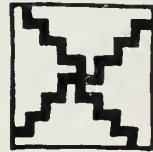
No. 852.



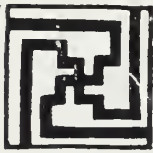
No. 853.



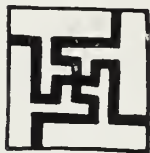
No. 854.



No. 855.



No. 856.



No. 857.



No. 858.

Nos. 844A, 845A, and 846A are the reciprocals of Nos. 844, 845, and 846.

The relations of the border, or enclosing frame, to the ornament within it and to the direction of the setting-out lines of the pattern are important factors in decorative design.

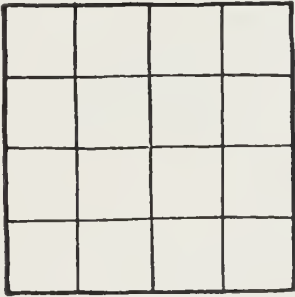
There are three ways of dealing with the border, each of which is adopted by different schools of design; (1) the pattern may be arranged first and the border made to fit it; on (2) the shape of the border may be fixed beforehand and the pattern adjusted to suit it; or (3) the border and

the pattern may be treated as being entirely independent of each other, as when a piece of figured wallpaper is cut into any desired form with a pair of scissors quite regardless of the pattern upon it.

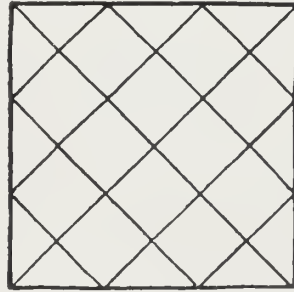
The first course is seldom resorted to, as it makes the border crooked; and the third is employed in Japanese art with subtle effect. The second alternative is the one chosen by the Celtic designer, who seems always to have been actuated by a desire to make the border as prominent a feature as possible, and to enclose within it a series of smaller panels also having a very distinct border and each containing a piece of ornament complete in itself.

The key-patterns which have been already described were set out by drawing straight lines parallel to the horizontal and vertical sides of a rectangular border so as to divide up the whole surface into squares (No. 859).

Patterns of this class are occasionally used in Celtic art, but are much more common in ancient Greek and Roman art and modern Chinese and Japanese art. It is proposed to call all key-patterns set out thus "square"



No. 859.



No. 860.

key-patterns, as distinguished from "diagonal" key-patterns, where the setting-out lines cut the border at an angle of 45° instead of 90° (No. 860).

One reason why the Celtic designer exhibits a marked preference for diagonal key-patterns is probably because the raking lines are so much more satisfactory from an æsthetic point of view; and another reason may have been that the same setting-out lines would be equally suitable for a key-pattern or a piece of interlaced work.

The special way in which the character of the pattern is here affected by altering the direction of the setting-out lines with regard to the border

is that the squares round the edge are cut diagonally in half by it, so as to form a series of triangles, and these triangles have to be filled in differently from the rest. In some of the earliest illuminated MSS., such as the Lindisfarne Gospels in the British Museum (Nero, D. iv.), the triangles round the edge are not filled in at all, except with colour, so that the diagonal key-pattern used does not differ from a square key-pattern except that it is turned round through an angle of 45° .

In most cases, however, the pattern is continued into the marginal triangles by filling them with straight-line spirals composed of lines making angular bends of 45° and 90° (Nos. 861 to 870).



No. 861.



No. 861A.

No. 861. Single triangular straight-line spiral.

No. 861A. Reciprocal of No. 861 formed by interchanging the black and white lines.



No. 862.



No. 862A.

No. 862. Double triangular straight-line spiral.

No. 862A. Reciprocal of No. 862 formed by interchanging the black and white lines.

It will be noticed that in the square straight-line spirals the distance between the lines is the same throughout, but in the triangular straight-line spirals the distance appears to increase wherever a line raking at an



No. 863.



No. 864.

angle of 45° approaches another, as at every sharp corner and wherever a discontinuous line ends (Nos. 863 and 864).

There is a natural desire in the mind of the artist to remedy this defect by filling in the angles with black (No. 863A) or by making the end of the discontinuous line terminate in a black triangle (No. 864A), thus equalising the width of the lines of the white background throughout.



No. 863A.



No. 864A.

It is the predominance of these little black triangles which distinguishes Celtic key-patterns from all others, and their existence can be traced to two causes: (1) the prominence given to the border, and (2) the placing of the setting-out lines diagonally with regard to it.

In sculptured stonework the black triangles are represented by triangular sinkings, which produce the same effect by means of light and shade.

Nos. 865 to 870 are examples of triangular straight-line spirals ornamented in the way described.



No. 865.



No. 866.



No. 867.



No. 868.

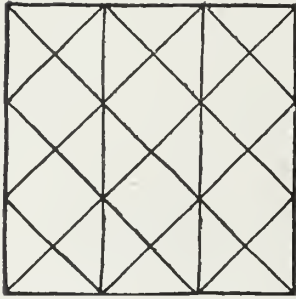


No. 869.

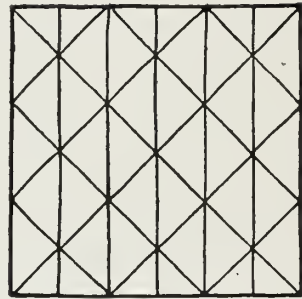


No. 870.

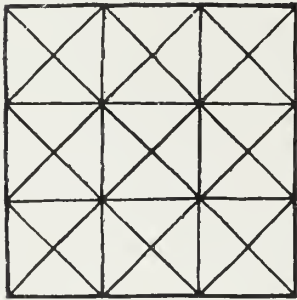
Other setting-out diagrams besides those already mentioned are used for Celtic key-patterns. They are formed by subdividing the squares in the diagrams previously given into two, four or eight triangles (Nos. 871 to 874).



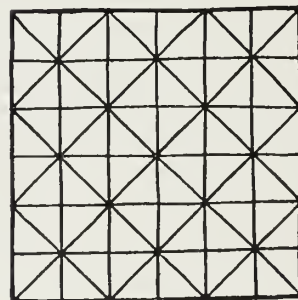
No. 871.









No. 872.

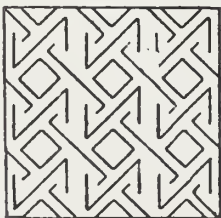


No. 873.

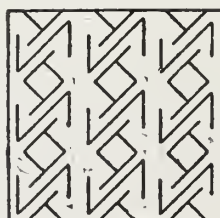


No. 874.

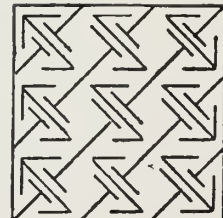
The method of drawing the key-patterns upon these diagonal setting-out lines is similar to that explained in the case of the square key-patterns, the only difference being that the bars of the  and  are bent at angles of 45° instead of 90° thus   to suit the altered circumstances. The various methods of covering a surface with distorted  s and  s are shown on Nos. 875 to 880.



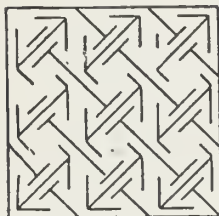
No. 875.



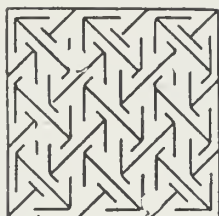
No. 876.



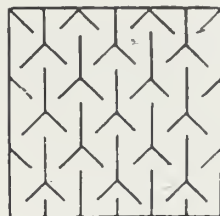
No. 877.



No. 878.



No. 879.



No. 880.

All that has now to be done to complete the pattern is to fill in the vacant spaces between the connecting lines with square or triangular straight line spirals and finish them off where necessary with little black triangles.

The example given on Nos. 881 to 882B will be sufficient to make the process clear.



No. 881.



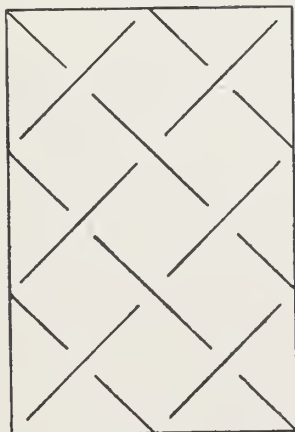
No. 881A.



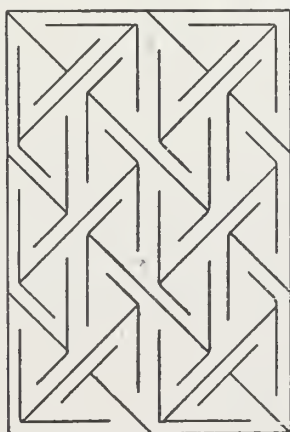
No. 881B.



No. 881C.



No. 882.



No. 882A.



No. 882B.



No. 883.



No. 883A.



No. 883B.



No. 883C.



No. 884.



No. 884A.



No. 884B.




No. 885.



No. 885A.



No. 885B.

In No. 885 the straight-line spirals have  shaped connections

and the pattern, therefore, belongs to those where the setting-out lines form equilateral triangles or hexagons and not squares, one angle of 90° and two others of $90^\circ + 45^\circ = 135^\circ$ being substituted for the three equal angles of 120° of the regular triangular or hexagonal system.

Analysis of Key-Patterns, with the Localities where each Pattern occurs.

Square Key-Patterns, designed for Straight Borders or Rectangular Panels (Nos. 886 to 923).

Note.—"Square" Key-Patterns are those in which the setting-out lines form squares with their sides parallel to the margin (see p. 325).



No. 886.—Key-pattern formed of | shaped bars placed opposite each other thus



(compare with Nos. 817 and 821).¹

Crieff.
Dunblane.
Rothesay, No. 1.

England—
Bolton, Lancashire.



No. 887.—Key-pattern formed of L shaped bars placed thus



(compare with Vertical Rows in No. 827A).

Benvie.
Invergowrie, No. 1.
Kiriemuir, No. 3.
" No. 4.
" No. 5.
Dupplin.
Forteviot, No. 2.
" No. 3.
Invermay, No. 1.
St Andrews, No. 5.
" No. 8.

St Andrews, No. 9.
" No. 11.
Govan, No. 1.
Drainie.
Farnell.

England—
Kirkby Wharfe, Yorkshire.
Dewsbury, "
Warkworth, Northumber-
land.

England—continued.
Billingham, Co. Durham.
Gulval, Cornwall.
Cardynham, "
Waterpit Down, "



Wales—
Pen Arthur, Pembroke-
shire.

Ireland—
Clonmacnois.

¹ Each border pattern has a corresponding surface pattern, and the surface patterns were probably arrived at by doubling, trebling, and quadrupling the border patterns.

ANALYSIS OF KEY-PATTERNS, WITH THE LOCALITIES—*continued.*



No. 888.—The same as No. 887 but with a black bar along the centre of the white spaces between each of the  shaped bars. The effect of this is to make the shapes of the portions of the white background visible to the eye simultaneously with the black  shaped bars which form the key-pattern. It will be found that the mind must be concentrated either on the black bars or on the white background, but that it cannot comprehend both at once. In the present instance the black and the white portions of the pattern are of the same shape, although this is not always the case as has been explained on p. 310. In sculptured stone-work the same effect is produced by a double bead moulding. Hence the key-pattern is said to be “double-beaded.”




St Vigean's, No. 10.	Wales— Nevern, Pembroke-shire.	Isle of Man— Kirk Maughold.	MSS.— British Museum, I. E. vi.
Liberton, No. 1.			



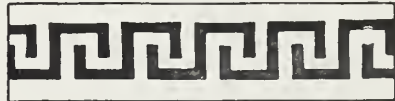
No. 889.—Key-pattern formed by combining No. 887 with its symmetrical opposite, so that the portions on each side of the horizontal centre-line correspond but face different ways.




Ardehatten. | Whithorn, No. 5.








No. 890.—Key-pattern formed of  shaped bars, but placed facing in opposite directions alternately, thus . Here the white background is composed of  shaped bars (compare with No. 899).

Benvie. | MSS.—
Dupplin. | British Museum, I. E. vi.



No. 891.—Key-pattern composed of  shaped bars placed thus , the ends of the  s being bent round spirally through one right angle (compare with horizontal rows in No. 827A). This pattern corresponds to a chain of Ss in spiral-work.



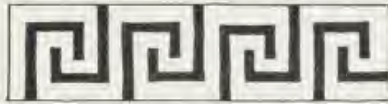
No. 892.—Key-pattern composed of  shaped bars placed thus . The  in a border pattern corresponds with a half  or a half  in a surface pattern.

Drainie.	Inchbrayock, No. 1.	Benvie.
Farnell.	Aldbar.	Wales—
Glamis Wood.	Crail.	Nevern, Pembrokeshire.

ANALYSIS OF KEY-PATTERNS, WITH THE LOCALITIES—*continued.*



No. 893.—Key-pattern composed of L shaped bars placed thus .



No. 894.—The same as No. 892, but with the ends of the L^s bent round spirally through one right angle.

Kilbar.
Crail.


Ireland—
Monasterboice.
Kells.



No. 895.—The same as No. 894, but with the ends of the L^s joined. This pattern may also be obtained from No. 891 by bending the ends of the bars through an additional right angle and interchanging the black for white.

Ireland—Clonmacnois (sepulchral slabs).



No. 896.—Key-pattern composed of L shaped bars placed thus , and the ends of the L^s bent round spirally through three right angles.

Ireland—Clonmacnois (sepulchral slabs).



No. 897.—Key-pattern composed of L shaped bars and inverted L shaped bars, having their ends bent round through two right angles (compare with No. 829A).

Wales—Nevern, Pembrokeshire.



No. 898.—Border key-pattern of same type as surface key-pattern No. 833A, composed of L and inverted L shaped bars, with the ends of the latter bent round spirally through one right angle.

Abereromby, No. 2.

Millport.

ANALYSIS OF KEY-PATTERNS, WITH THE LOCALITIES—*continued.*

No. 899.—Key-pattern composed of T shaped bars placed thus $\overline{\text{T}} \perp \overline{\text{T}} \perp$

Menmuir.
St Vigean's, No. 11.
St Kieran's Cave.
Whithorn.
England—
Ilam, Staffordshire.

England—continued.
Leek, Staffordshire.
Stoke-upon-Trent, Stafford-
shire.
Lyme Hall, Cheshire.
Camborne, Cornwall.

England—continued.
Pendarves, Cornwall.
Cardynham, „
Wales—
Llangaffo, Anglesey.
Llanwnda, Pembrokeshire.



No. 900.—The same as No. 899, but doubled-beaded.

Wales—Carew, Pembrokeshire.



No. 901.—The same as No. 899, but with the black and white reversed, and the white T's outlined in black (compare with No. 890).

Wales—Golden Grove, Carmarthenshire.



No. 902.—The same as No. 900, but with the ends of the lines of the beading produced and the T shaped bars placed with the tops of the T's in one straight line.

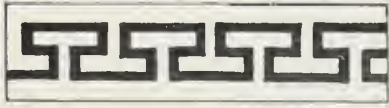
England—St John's, Chester.



No. 903.—The same as No. 899, but with the ends of the T's bent round spirally through two right angles.

Wales—Penmon, Anglesey.

ANALYSIS OF KEY-PATTERNS, WITH THE LOCALITIES—*continued.*



No. 904.—The same as No. 899, but with the black and white reversed.

MSS.—British Museum, Harl. 2788.



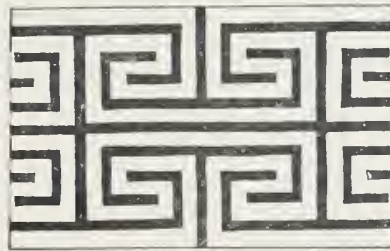
No. 905.—The same as No. 983, but with the black and white reversed.



No. 906.—Key-pattern formed by combining No. 899 with its symmetrical opposite, so that the portions on each side of the horizontal centre-line correspond, but face in different directions. This shows how the **H** surface key-pattern No. 831A is developed out of a **T** border pattern by doubling it.

England—
Grosvenor Museum, Chester.

Wales—
Maen Achwyfan, Flintshire.
Penmon, Anglesey.



No. 907.—The same as No. 906, but with the ends of the **T**s and **H**s bent round spirally through two right angles.

Wales—Penmon, Anglesey.

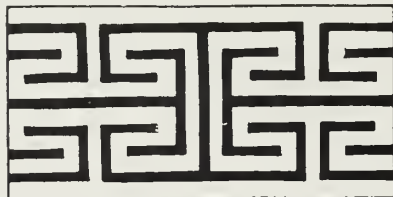


No. 908.—Key-pattern composed of **T** and **H** shaped bars, the ends of the latter being bent round spirally through one right angle.

Aldbar.
St Vigean's, No. 11.
Crail.

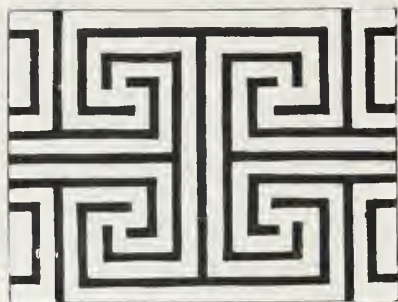
Wales—
Penmon, Anglesey.

MSS.—
British Museum, Harl.
2788.

ANALYSIS OF KEY-PATTERNS, WITH THE LOCALITIES—*continued*.

No. 909.—Key-pattern composed of H shaped bars placed thus I H I H , and the ends of the Hs bent round spirally through two right angles (compare with surface key-pattern No. 832A).

Wales—Llanhamllech, Brecknockshire.



No. 910.—Key-pattern composed of H and T shaped bars arranged thus $\begin{array}{c} \text{I} \\ \text{H} \\ \text{T} \end{array} \text{I} \begin{array}{c} \text{I} \\ \text{H} \\ \text{T} \end{array} \text{I}$

and the ends of the Ts and Hs bent round spirally through two right angles and interlocked. On comparing this with surface key-pattern No. 833c, it will be noticed that in the latter there are four sets of bars converging to each interlocking centre instead of three. The same thing occurs in the corresponding pattern in spiral ornament to be referred to subsequently.

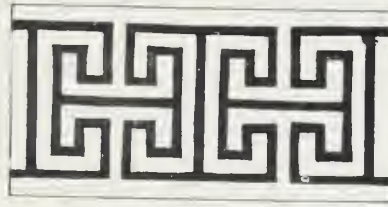
MSS.—British Museum, Harl. 2788.



No. 911.—The same as No. 908, but with the black and white reverse l. It may also be obtained by doubling No. 905.

St Vigean's, No. 11.

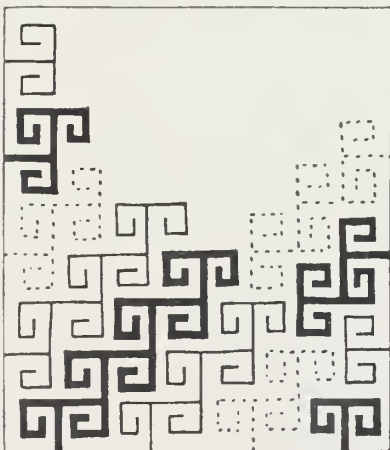
ANALYSIS OF KEY-PATTERNS, WITH THE LOCALITIES—*continued.*



No. 912.—The same as No. 909, but with the ends of the Hs joined. The white bars of the background are T shaped and C shaped.
MSS.—British Museum, Harl. 2788.



No. 913.—Key-pattern formed by repeating No. 906 two and a half times.
Wales—Penmon, Anglesey.



No. 914.—Surface key-pattern with tree-like branches as in No. 837A.

Meigle, No. 26.
 St Vigean's, No. 18.


Woodway.
 Farr.

Dunfallandy.
 Rossie.

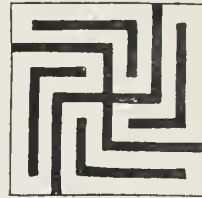



No. 837A.

ANALYSIS OF KEY-PATTERNS, WITH THE LOCALITIES—*continued.*

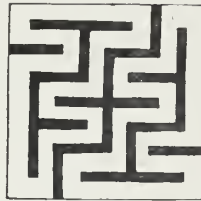
No. 915.—Swastica key-pattern No. 844, with  shaped bars in each angle of the central cross.

Ireland—
Glencar, Co. Kerry.
MSS.—
Lindisfarne Gospels.

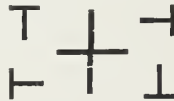


No. 916.—Swastica key-pattern No. 845, with  shaped bars forming a double beading.

MSS.—
Cologne Penitential.




No. 917.—A key-pattern apparently suggested by four  shaped bars arranged round a central cross thus



MSS.—Lambeth Library, Gospels of Maedurnan.



No. 918.—Swastica key-pattern No. 846 surrounded by four crosses. The four  s and the central cross seem to underlie this design also.

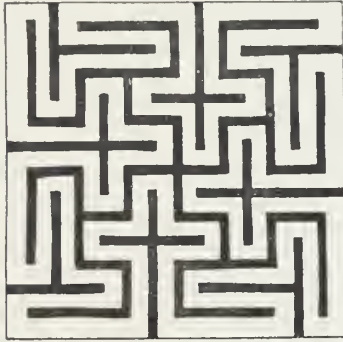
Ireland—
Kells.



No. 919.—Key-pattern with bars arranged swastica fashion, with other bars branching out at right angles as in No. 886.

Rothesay, No. 1.

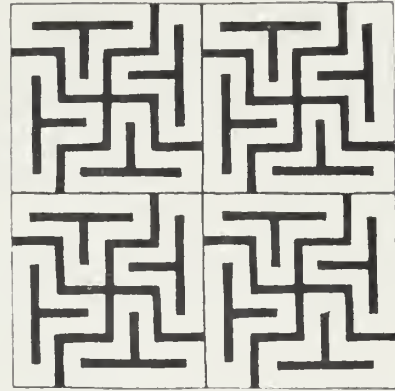
ANALYSIS OF KEY-PATTERNS, WITH THE LOCALITIES—*continued.*



No. 920.—The same type of swastica key-pattern as No. 918, but more highly developed.

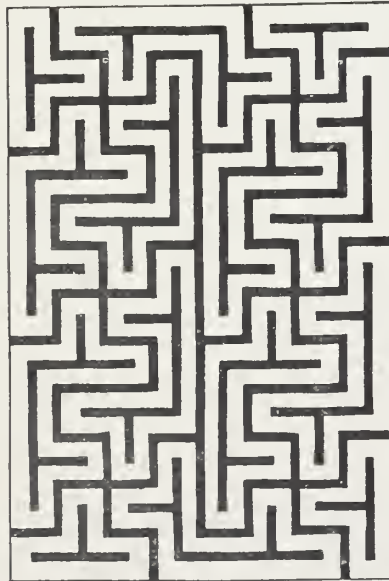
Metalwork—

Edinburgh Museum of Science and Art—
Inlaid plate from Moradabad, India.



No. 921.—Swastica key-pattern No. 846, with four T shaped bars forming a double beading on the white background. The central cross and four T s appear here also.

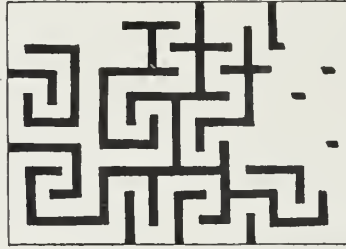
England—Norham, Northumberland.
Wales—Llantwit Major, Glamorganshire.
Golden Grove, Carmarthenshire.
Carew, Pembrokeshire.
MSS.—British Museum, I. E. vi.



No. 922.—Surface key-pattern derived from No. 921 by joining the ends of the T shaped bars which are placed thus



Wales—Nevern, Pembrokeshire.

ANALYSIS OF KEY-PATTERNS, WITH THE LOCALITIES—*continued*.

No. 923.—An irregular surface key-pattern of the same class as the preceding.

Rothesay, No. 1.

The geographical distribution of the square patterns, more especially those of the Greek fret type, show that they are more common in Mercian England and North Wales than in Scotland or Ireland. This points to their being Saxon or Carolingian imitations of classical originals. The Scotie designers always show a preference for the diagonal key-patterns.

Diagonal Key-Patterns filling Rectangular Spaces (Nos. 924 to 1012).No. 924.—Key-pattern formed of \checkmark shaped bars placed thus $\checkmark \wedge \checkmark \wedge$, and having the triangles filled in with single straight-line spirals.*Isle of Man*--
Kirk Maughold.

Meigle, No. 6.

No. 925.—Key-pattern formed of \wedge shaped bars placed thus $\wedge \wedge \wedge$, and having the triangles filled in with single straight-line spirals.

Meigle, No. 24.

ANALYSIS OF KEY-PATTERNS, WITH THE LOCALITIES—*continued.*



No. 926.—The same as No. 925, but with the ∇ shaped bars placed thus $\nabla \nabla \nabla$, and having the triangles filled in with double straight-line spirals.

Rosemarkie, No. 2.	St Andrews, No. 21.	Wales—
Drainie, No. 10.		Llandrinio, Montgomeryshire.
St Vigean's, No. 4.		Llandevaelog, Brecknockshire.
Meigle, No. 29.	England—	
St Andrews, No. 7.	St Erth, Cornwall.	MSS.—
„ No. 9.	Sancreed, „	Psalter of St Augustine.



No. 927.—The same as No. 925, but with the angles of the straight-line spirals filled in with small black triangles (No. 865).

Metalwork—Domnach Airgid.



No. 928.—The same as No. 926, but finished off with two small black triangles to each bay (No. 867).

MSS.—Lichfield, St Chad's Gospels.



No. 929.—The same as No. 926, but finished off with three small black triangles to each bay (No. 868).

Ireland—
Clonmacnois.

MSS.—
British Museum, Harl. 2788.
„ „ Bede's Eccl. Hist. (Tib., C. ii.).
„ „ Psalter (Vesp., A. i.).



No. 930.—The same as No. 926, but finished off with five small black triangles to each bay (No. 870)



MSS.—British Museum, Bibl. Reg., I. E. vi.






No. 931.—The same as No. 926, but finished off with five small black triangles to each bay in a similar way to No. 869.

MSS.—St Gall.

ANALYSIS OF KEY-PATTERNS, WITH THE LOCALITIES—*continued*.

No. 932.—Produced by doubling No. 928, thus giving a series of  and  shaped bars arranged thus

  , and finished off with two small black triangles to each bay (No. 867).

Kirriemuir, No. 1.
Invergowrie, No. 1.
Rosemarkie, No. .

MSS.—
St Gall Gospels,
St Chad's Gospels.
Book of Kells,

Metalwork—
Mus. R.I.A.—Plaque with
crucifixion.



No. 933.—The same as No. 932, but finished off with three small black triangles to each bay (No. 869).

Inchcolm,
Gattonside.
Ireland—
Clonmacnois.
MSS.—
British Museum, Psalter (Vit., F. xi).
Dimma's Book.

Ivories—
St Genoel's Elderen, Limburg (Diptych).






Metalwork—
Bronze Bell found at Cashel, now at
Adare Manor.



No. 934.—The same as No. 932, but with large black squares in the centre instead of pairs of smaller ones.

MSS.—St Gall Gospels.



No. 935.—Key-pattern composed of  and  shaped bars arranged thus    and the triangles filled in with double straight-line spirals (No. 862A).

Wales—
Llantwit Major, Glamorganshire.
Llangevelach, ,

Ireland—
Castle Dermot.

ANALYSIS OF KEY-PATTERNS, WITH THE LOCALITIES—*continued*.



No. 936.—Key-pattern, produced by doubling No. 926, composed of \swarrow and \searrow shaped bars arranged thus $\swarrow \searrow \swarrow$, and the triangles filled in with double straight-line spirals (No. 862A).

Ireland—Kells.



No. 937.—The same as No. 935, but with the central vertical bar not continuous, and each bay finished off with two small black triangles (No. 867).

MSS.—Book of Kells.



No. 938.—The same as No. 937, but with each of the outside bays finished off with three small black triangles, and the central bays finished off with small black squares and single black triangles.

MSS.—Book of Kells.



No. 939.—The same as No. 936, but with large black squares introduced in every other bay in the centre.

MSS.—St John's Coll., Cambridge, Irish Psalter.



No. 940.—Key-pattern composed of Z and Z shaped bars arranged thus $\text{Z} \wedge \vee \text{Z}$, and finished off with pairs of small black triangles (No. 867) and large squares in the centre.

Govan.

England—

Lanivet, Cornwall.

Wales—

Penally, Pembrokeshire.

MSS.—

St John's Coll., Cambridge (Irish Psalter).

ANALYSIS OF KEY-PATTERNS, WITH THE LOCALITIES—*continued.*

No. 941.—Key-pattern composed of Z and \sphericalangle shaped bars arranged thus Z \sphericalangle Z, and each outer bay finished off with pairs of small black triangles (No. 867) and each central bay with pairs of black rectangles.

Kildalton (quadrant of ring of cross).
England—
 Hurworth, now at Durham.
 Norham, Northumberland.

Ireland—
 Kells.



No. 942.—The same as No. 941, but with each of the outer bays finished off with three small black triangles (No. 868) and the central bays with bars branching at right angles, like the teeth of a rack.

Crieff.



No. 943.—The same as No. 941, but the central bays each finished off with two large black triangles (No. 843).

Burghead, No. 10A.



No. 944.—Key-pattern formed of S and \sphericalangle shaped bars arranged thus S \sphericalangle S, and finished off as in No. 943.

St Vigean's, No. 12.



No. 945.—The same as No. 944, but with the pairs of black triangles which finish off the central bays placed with the white space between them vertically instead of horizontally.

St Andrews, No. 10.

Govan, No. 34.

ANALYSIS OF KEY-PATTERNS, WITH THE LOCALITIES—*continued.*



No. 946.—The same as No. 945, but with the central bays each finished off with a pair of black rectangles instead of triangles.

St Andrews, No. 14.



No. 947.—The same as No. 945, but with the central bays finished off with double spirals.



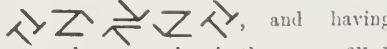
MSS.—Lambeth Lib.—Gospels of MacDurnan.



No. 948.—The same as No. 947, but with the outer bays finished off with sets of four small black triangles (No. 869).



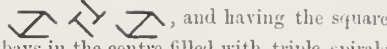
MSS.—
Book of Armagh.
Gospels of MacDurnan.



No. 949. — Key-pattern formed of  and  shaped bars arranged thus , and having every other square bay in the centre filled in with double spirals and the remaining triangles with double straight-line spirals.

Ireland—
Monasterboice.



No. 950. — Key-pattern formed of  and  shaped bars arranged thus , and having the square bays in the centre filled with triple spirals and the remaining triangles with double straight-line spirals finished off with pairs of small black triangles (No. 867).

Dupplin.
Isle of Man—
Kirk Bride.

ANALYSIS OF KEY-PATTERNS, WITH THE LOCALITIES—*continued.*

No. 951.—The same as No. 950, but with the square bays in the centre filled in with quadruple straight-line spirals having forked-branch terminations.

Dupplin.



No. 952.—The same as No. 951, but without the forked-branch terminations to the quadruple straight-line spirals.

Farnell.

Dunblane.

Meikle, No. 20.

England—

Lanivet, Cornwall.

Wales—

Penally, Pembrokeshire.



No. 953.—The same as No. 952, but with the ends of the quadruple straight-line spirals in the square central bays meeting in a point, and the remaining triangular bays finished off with pairs of small black triangles (No. 867).

MSS.—British Museum, Harl. 2788.



No. 954.¹—The same as No. 941, but with the square central bays completely filled in with black, and the triangular bays finished off with sets of four small black triangles (No. 869).

MSS.—Lambeth Lib.—Gospels of MacDurnan.




No. 955.—Key-pattern formed of \searrow and \swarrow shaped bars arranged thus $\searrow \swarrow \swarrow \searrow$, and having the square central bays filled in with double straight-line spirals and the triangular bays finished off with pairs of small black triangles (No. 867).

Ireland.—Kells.

¹ This pattern is out of its right order and should have come immediately after No. 943.


ANALYSIS OF KEY-PATTERNS, WITH THE LOCALITIES—*continued*.



No. 956.—Key-pattern composed of \swarrow and \searrow shaped bars arranged thus , and having the square central bays filled in with double straight-line spirals and the triangular bays with single straight-line spirals.

Kilmartin.

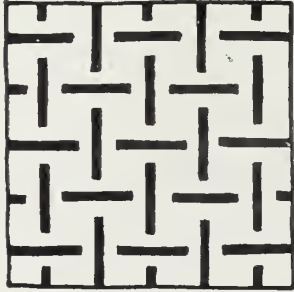


No. 957.—Key-pattern composed of \nwarrow and \swarrow shaped bars arranged thus , and having the square and triangular bays both filled in with single straight-line spirals.

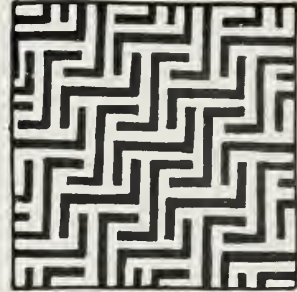
Kingoldrum.

We have now arrived at the point when the patterns cease to be mere borders and become surface-patterns adapted to fill large rectangular panels. Nos. 958 to 984 are all surface key-patterns. It seems probable that the surface-patterns were developed out of the borders by doubling, trebling, or quadrupling them, otherwise the complicated arrangements of the bars, forming the basis of the pattern so as to make them interlock correctly at regular intervals whilst meandering over the entire area, would not have been easily hit upon. It will be seen that, in consequence of the setting-out lines of the pattern being placed diagonally with regard to the margin, the angles of the \swarrow or \nwarrow shaped bars have to be altered to suit it, thus converting them into \searrow and \swarrow . The latter no doubt suggested the \searrow shaped bar which forms the basis of the most characteristic of all the Celtic key-patterns, viz., No. 974.

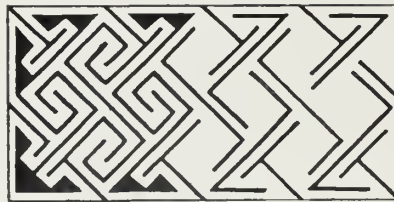
ANALYSIS OF KEY-PATTERNS, WITH THE LOCALITIES—*continued.*




No. 829 repeated.



No. 829A repeated.

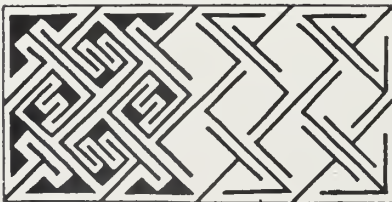


No. 958.—Surface key-pattern based on  shaped bars interlocked as in No. 829A, and of same type as border-pattern No. 941, but with plain double straight-line spirals filling the squares.

Ulbster.
Nigg.
Canna.
Burghead, No. 9.

Burghead, No. 12.
Aberlemno, No. 3.
Ardchattan.
Abercorn.

Kilmartin.
England—
Norham, Northumberland.



No. 959.—Surface key-pattern based on the same arrangement of bars as No. 958, but with the square bays filled in as in border key-pattern No. 942 and finished off with two small black rectangles.

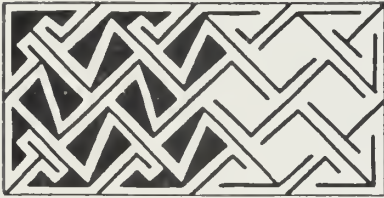
Collieburn.



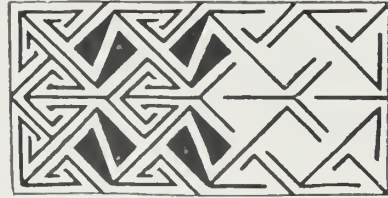
No. 960.—Surface key-pattern based on the same arrangement of bars as No. 958, and corresponding with border key-pattern No. 941, except that the square bays are finished off with black triangles instead of black rectangles.

Rosemarkie, No. 1.

ANALYSIS OF KEY-PATTERNS, WITH THE LOCALITIES—*continued.*



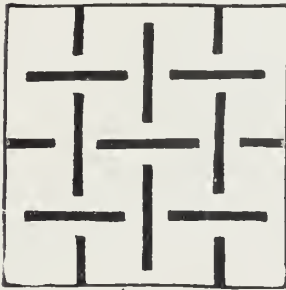
No. 961.—The same as No. 960, but adapted for a panel two bays instead of one and a half bays in width.



No. 962.—A combination of No. 961 with No. 936.

†

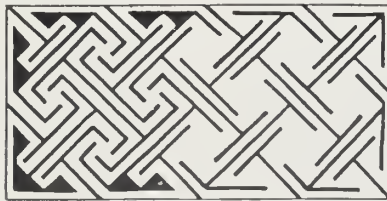
MSS.—Book of Kells.




No. 832 repeated.



No. 832A repeated



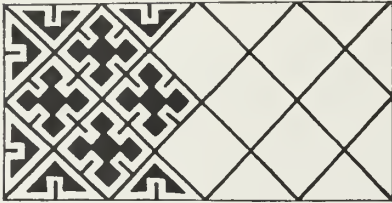
No. 963.—Surface key-pattern based on  shaped bars interlocked as in No. 832A and of same type as border key-pattern No. 952.

St Andrews, No. 14.
Mugdrum,
Rosemarkie, No. 1.

Wales—
Penally, Pembrokeshire.

MSS.—
British Museum, Harl. 2788.
St Gall Gospels.

ANALYSIS OF KEY-PATTERNS, WITH THE LOCALITIES—*continued.*



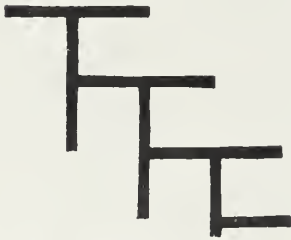
No. 964.—This is really more of a diaper than a key-pattern, and it is only placed here because the panel is the same size as in No. 963. The surface is divided into squares by diagonal lines. Each square is filled with a cruciform figure made by placing four small black squares at the angles of a central square. The triangular bays round the edge are filled in with a figure made up of three small black triangles.

Nigg.
MSS.—Book of Kells.



No. 965.—Surface key-pattern of same type as border key-pattern No. 957, based on bars branching out like the boughs of a tree from a zigzag stem (No. 837A).

Meigle, No. 6.



No. 837 repeated.

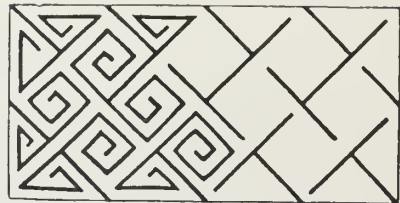


No. 837A repeated.



No. 966.—The same class of pattern as No. 965, but two bays in width instead of one and a half, and having the triangular bays round the edge filled in with black.

MSS.—
Bodleian Lib., Oxford—Gospels of Mac-Regol.



No. 967.—The same class of pattern as No. 965, but of the same width as No. 966.

Kirriemuir.
Monifieth, No. 1.
Strathmartine, No. 3.
St Vigean's, No. 2.
Dunkeld, No. 3.

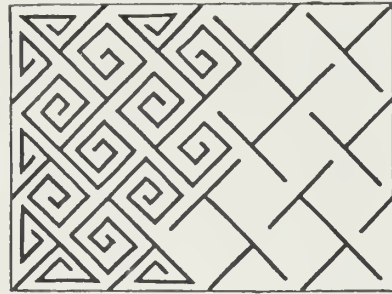
Meigle, No. 7.
" No. 24.
" No. 28.
Ireland—
Kells.

ANALYSIS OF KEY-PATTERNS, WITH THE LOCALITIES—*continued.*



No. 968.—The same class of pattern as No. 966, but three bays wide instead of two.

MSS.—
Gospels of MacRegol.
Lindisfarne Gospels.



No. 969.—The same class of pattern as No. 967, but three bays wide instead of two.

Farr.
Rosemarkie, No. 1.
Kettins.
Strathmartine, No. 2.
St Andrews, No. 4.
Inchbrayock.

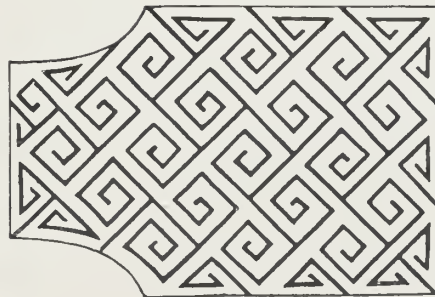


No. 970.—The same class of pattern as No. 968, but four bays in width instead of three.

MSS.—
Lindisfarne Gospels.

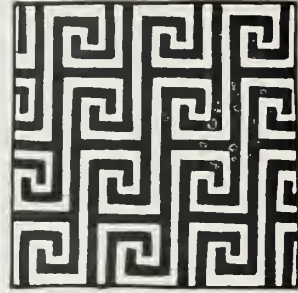
No. 970A (no diagram).—The same class of pattern as No. 969, but four bays in width instead of three.

Golspie.
Nigg.



No. 971.—Pattern of the same class as No. 969, on the arm of cross.

Lothbeg.
Reay.
Aberlemno, No. 2.
St Vigean's, No. 7.
Fowlis Wester.
Meikle, No. 3.
" No. 5.
St Madoes, No. 1.

ANALYSIS OF KEY-PATTERNS, WITH THE LOCALITIES—*continued.*

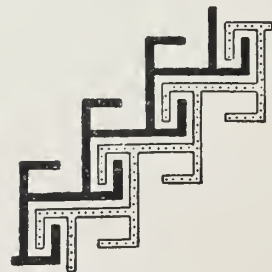
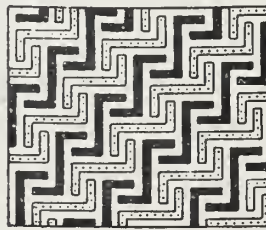
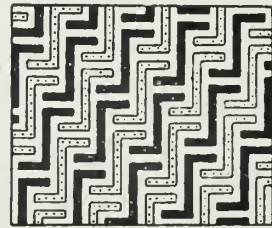
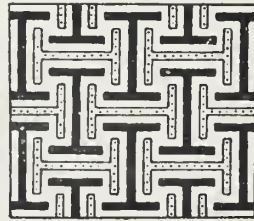
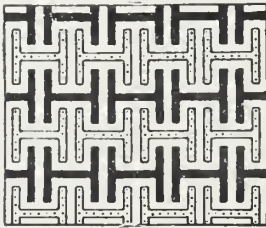
No. 828c repeated.

No. 972.—Pattern of the same class as No. 968, except that the branches from each adjacent pair of trees interlock and form double spirals instead of single ones (compare with No. 828c). The ends of the branches are finished off with black triangles.

MSS.—Lindisfarne Gospels.

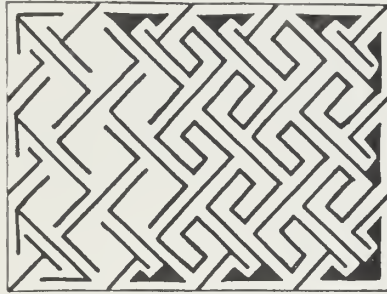
No. 972A (no diagram).—The same as No. 972, but with bosses and spiral-work in the square bays.

Iona, No. 2.
 „ No. 3.
 „ No. 5.



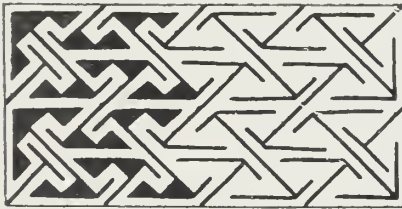
No. 972B.—Diagram showing various methods of interlocking surface key-patterns.

ANALYSIS OF KEY-PATTERNS, WITH THE LOCALITIES—*continued.*

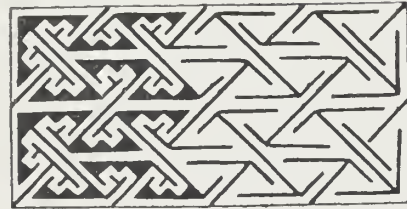


No. 973.¹—The same as No. 958, but three bays wide instead of two, and with the ends of the straight-line spirals in the square bays joined together.


Wales—
Silian, Cardiganshire.



No. 974.



No. 975.

Nos. 974 to 976.—Surface key-patterns based on  shaped bars corresponding to border key-pattern No. 932.

Farr² (4 bays by 4 bays).
Reay (8 bays by 8 bays).
Rosemarkie, No. 1 (9 bays by 9 bays).
 " No. 2 (5 bays by 3 bays).
Shandwick (5 bays).
St Vigean's, No. 24.
Meigle, No. 4.
St Andrews, No. 1.
 " No. 7.
 " No. 8.
 " No. 14.

St Andrews, No. 20.

MSS.—

St Chad's Gospels.
Book of Kells.
Lindisfarne Gospels.
Gospels of MacDurnan.

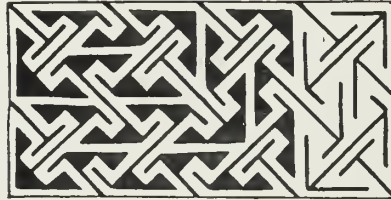
Metalwork—


Bronze Buckle found at Islandbridge near
Dublin.

¹ This pattern is out of its proper order and should have followed No. 958.

² The number of bays in the width of the panel and the ways of finishing off the pattern with little black triangles varies in the different examples specified.

ANALYSIS OF KEY-PATTERNS, WITH THE LOCALITIES—*continued.*

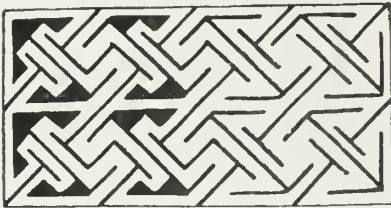


No. 976.—In this case the  bars do not all run in the same direction.

MSS.—

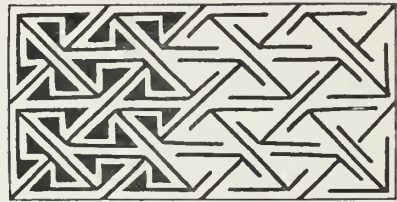
Book of Kells.

Lindisfarne Gospels.



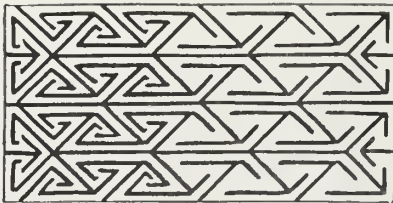
No. 977.—Surface key-pattern corresponding to border-pattern No. 952, but with two of the bars of the quadruple straight-line spirals joined together.

Ireland—
Kells.



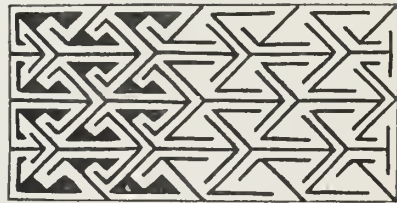
No. 978.—The same type of pattern as No. 974, but with triangular bays finished off with pairs of black triangles.

MSS.—
Gospels of MacRegol.



No. 979.—Surface key-pattern of same type as border key-pattern No. 935.

Wales—
Llantwit Major, Glamorganshire.



No. 980.—Surface key-pattern of same type as border key-pattern No. 937.

Nigg,
Tullibole.

ANALYSIS OF KEY-PATTERNS, WITH THE LOCALITIES—*continued.*



No. 981.—Surface key-pattern of same type as border key-pattern No. 940.

MSS.—
St Gall Gospels.



No. 982.—Surface key-pattern of same type as border key-pattern No. 947, but with double straight-line spirals in the square bays.

Drainie, No. 15.
England—
Irton, Cumberland.



No. 983.—Surface key-pattern of same type as border key-pattern No. 956.

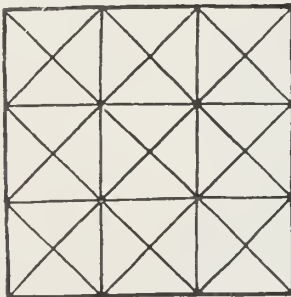
Jordanhill.



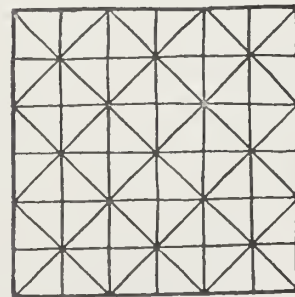
No. 984.—The same type of pattern as No. 958, but with the central row of square bays divided into two triangles and filled in with single straight-line spirals, and having the triangular bays round the outside finished off with sets of three small black triangles (No. 868).

Nigg.

The remaining key-patterns adapted to fill rectangular spaces may be called diaper key-patterns, since the setting out lines both horizontally and



No. 873 repeated.



No. 874 repeated.

vertically and also in the direction of the two diagonals of a square (Nos. 873 and 874), thus produce the star-like appearance where the lines meet in a point, as in the diaper surface ornament of Gothic architecture.

ANALYSIS OF KEY-PATTERNS, WITH THE LOCALITIES—*continued*.


Nos. 985 to 990, 995 to 999, 1002 and 1003, and Nos. 1007 to 1012 occur usually in isolated squares, but they can also be repeated to form a border or surface-pattern.



No. 985.—A square divided diagonally into two triangles and filled in with double straight-line spirals.

Wales—Margam, Glamorganshire.



No. 987.—A square divided diagonally into two triangles and filled in with  and

 shaped bars placed thus , each

bay being finished off with pairs of black triangles (No. 867).

Drainie, No. 11.

St Vigean's, No. 15.

England—

Lindisfarne, Northumberland.

MSS.—

St Chad's Gospels.

Book of Kells.

British Museum, Psalter (Vit., F. xi).



No. 989.—The same as No. 987, but having each bay finished off with sets of four small black triangles.

MSS.—Gospels of MacDurnan.



No. 986.—A square divided diagonally into two triangles and filled in with a figure formed of three small black triangles, there being a short bar crossing the diagonal in the centre at right angles.



No. 988.—The same as No. 987, but having each bay finished off with sets of three small black triangles (No. 868).

Wales—

Nevern, Pembrokeshire.

MSS.—

Gospels of MacDurnan.



No. 990.—The same as No. 987, but having each bay finished off with sets of five small black triangles.

MSS.—St Gall Gospels.

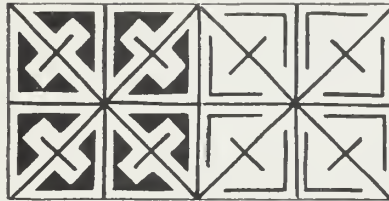
ANALYSIS OF KEY-PATTERNS, WITH THE LOCALITIES—*continued.*



No. 991.—Border key-pattern formed by repeating No. 986 in a single vertical row, the diagonals of the squares facing alternately to the right and to the left.

Wales—

Llantwit Major, Glamorganshire.
Carew, Pembrokeshire.
Golden Grove, Carmarthenshire.



No. 992.—Formed by doubling No. 991.

Wales—

Nevern, Pembrokeshire.
Golden Grove, Carmarthenshire.



No. 993.—Formed by repeating No. 988 in a single vertical row.

Ireland—

Monasterboice.

MSS.—

British Museum, Harl. 2788.



No. 994.—Formed by doubling No. 993.

Dogtown.

Keills.

No. 994A (no diagram).—The same as No. 994, but with three vertical rows instead of two.

England—

Irton, Cumberland.

MSS.—

Gospels of MacDurnan.

ANALYSIS OF KEY-PATTERNS, WITH THE LOCALITIES—*continued.*



No. 995.—A square divided into eight triangles, each filled in with single straight-line spirals.

Berneray.
 Invergowrie, No. 1.
 St Andrews, No. 7.
 ” No. 9.

Wales—
 Llantwit Major, Glamorganshire.
 Llangevelach, ”
Ireland—
 Termonfechin.
 Tuam.



No. 996.—The same as No. 995, but with four of the bars lapping over so as to form a swastica in the centre.

England—
 Lindisfarne, Northumberland.
 Alnmouth, ”



No. 997.—The same as No. 995, but with each triangular bay finished off with pairs of small black triangles.

MSS.—
 Gospels of MacDurnan.



No. 998.—The same as No. 995, but with each triangular bay finished off with sets of three small black triangles.

MSS.—
 St Gall Penitentiale.



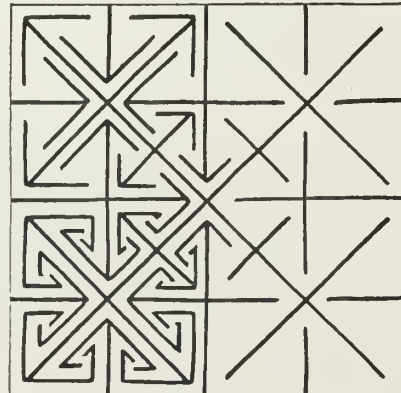
No. 999.—A variation of No. 995, produced by doubling some of the lines.

Wales—
 Maen Achwyfan, Flintshire.



No. 1000.—Formed by the repetition of No. 995 in a single vertical row.

England—
 Stainton-le-Street, now at Durham.



No. 1001.—Formed by repeating No. 995 in a double vertical row, with some variations in the centre.

Wales—Penmon, Anglesey.
Ireland—St Breacan's Bed, Aran Mór.

ANALYSIS OF KEY-PATTERNS, WITH THE LOCALITIES—*continued.*

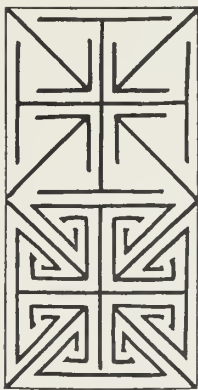


No. 1002.—Square divided into eight triangles, each filled in with double straight-line spirals. It differs from No. 995 in having the two bars which cross in the centre placed thus + instead of X. The lower right-hand quarter of the square in No. 1002 corresponds with the upper left-hand quarter of the square in No. 995.



No. 1003.—The same as No. 1002, but with each bay finished off with pairs of small black triangles.

MSS.—Gospels of MacDurnan.



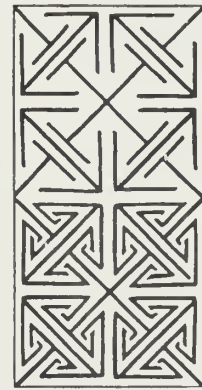
No. 1004.—Pattern formed by repeating No. 1002 in a single vertical row.

Monifieth, No. 1.
Dupplin.
England—
Lindisfarne, Northumberland.



No. 1005.—A combination of No. 1004 and No. 994.

Ireland—
Monasterboice.



No. 1006.—Formed by repeating No. 981 in two vertical rows as in No. 994, but with the figures in each bay facing alternately in opposite directions.

Monifieth.



No. 1007.—A square divided into four triangles and each filled in with single straight-line spirals all having the same direction of twist.

Wales—
Merthyr Mawr, Glamorganshire.
Margam, Glamorganshire.



No. 1008.—A square divided into four triangles and each filled in with No. 868 arranged swastica fashion.

England—
Stonegrave, Yorkshire.



No. 1009.—A square divided into four triangles and each filled in with No. 867 arranged swastica fashion.

Barrochan.
St Andrews.
Ireland—Clonmacnois.
Wales—
Margam, Glamorganshire.
Nevern, Pembrokeshire.

ANALYSIS OF KEY-PATTERNS, WITH THE LOCALITIES—*continued.*



No. 1010.—The same as No. 1009, but with a black square in the centre.

Wales—Golden Grove, Carmarthenshire.



No. 1011.—The same as No. 1010, but with each bay finished off with three small black triangles (No. 868) instead of two (No. 867).

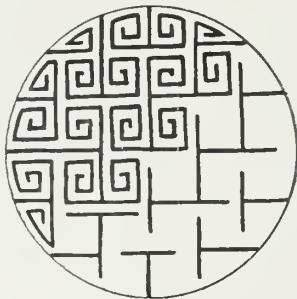
Wales—Margam, Glamorganshire.



No. 1012.—A square divided into four triangles and each filled in with No. 867 arranged swastica fashion.

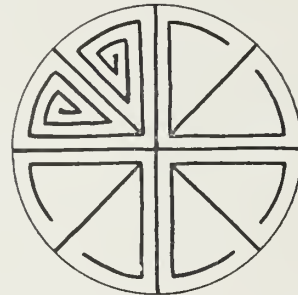
Wales—Nevern, Pembrokeshire.

Key-Patterns adapted for filling Circular and Annular Spaces
(Nos. 1013 to 1022A).



No. 1013.—Key-pattern of same type as No. 969, with single straight-line spirals branching from a zigzag stem like a tree.

Eassie, Meigle. | Glamis Wood, Rossie.



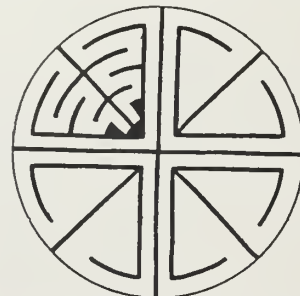
No. 1014.—Circle divided into eight segments by radial lines and each filled in with single straight-line spirals.

Ireland—Clonmacnois (slab of Conaing M'Conghail).



No. 1015.—The same as No. 1014, but each bay filled in with double straight-line spirals finished off with black triangles.

MSS.—Gospels of MacDurnan.



No. 1016.—The same as No. 1015, but with additional bars forming circular arcs branching out at right angles from the radial bars.

MSS.—Book of Kells.

ANALYSIS OF KEY-PATTERNS, WITH THE LOCALITIES—*continued.*



No. 1017.—Two concentric circles, the inner one like No. 1015 and the outer ring divided into eight segments, each filled in with a double straight-line spiral.

Wales—
Pen Arthur, Pembrokeshire.

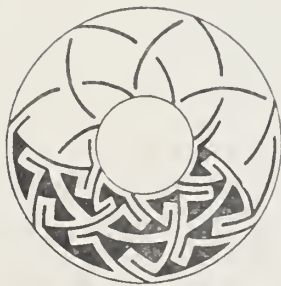


No. 1018.—Circle divided into eight rhombuses filled in with double straight-line spirals, eight squares filled in with swastica straight-line spirals, and eight triangles round the circumference filled in with double straight-line spirals.

Metalwork—Saracenic Casket, 13th cent., in British Museum.



No. 1019.—Trec key-pattern of same type as No. 967, adapted to fit an annular space. The Maiden Stone.



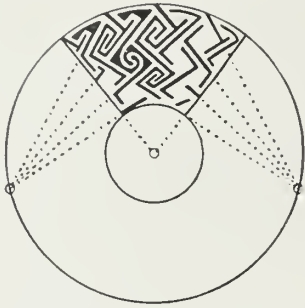
No. 1020.—The straight border key-pattern, No. 932, adapted to fit an annular space.

Nigg.



No. 1021.—The straight border key-pattern, No. 944, modified to fit an annular space.

Tarbet, No. 6.

ANALYSIS OF KEY-PATTERNS, WITH THE LOCALITIES—*continued*.

No. 1022.—The straight border key-pattern, No. 956, adapted to fit the fan-shaped segment of an annular ring, some of the square bays being filled in with double straight-line spirals and others with double curved spirals.

Hilton of Cadbol.

No. 1022A.—A square key-pattern of the Greek fret type, arranged in two concentric rings.

*Basketwork*¹—Arizona coiled basket, Smithsonian Museum, Washington.



No. 1022B.—The straight border key-pattern, No. 944, adapted to fit an annular space. It differs from No. 1021 in having the white space between each of the two black triangles in the square bays in the centre facing tangentially instead of radially.

MSS.—Book of Kells.

¹ This is another instance showing how key-patterns may have had their origin in the mechanical necessities of manufacture.

It is evident from the foregoing analysis of the key-patterns how very close a resemblance there is between the Ross-shire group of erect cross slabs and the Book of Kells.

SPIRAL PATTERNS.

Spiral curves may be discussed either from a mathematical, a mechanical, or an artistic point of view.

The mathematical conception of a spiral is the curve that would be traced by a point moving along the radius of a circle outwards from the centre whilst the radius was rotating.

The properties of the spiral were investigated by the Greek geometers, and perhaps the best known kind is the spiral of Archimedes, in which the distance of the tracing point from the centre varies directly as the radius vector. There are other kinds of spirals called the logarithmic, the hyperbolic, and the *lituus*.¹

A simple mechanical method of drawing a spiral is to fix a pencil to one end of a string and wind the other round a small cylinder held vertically. As the cord is unwound its distance from the centre is increased, whilst it rotates approximately round the centre of the cylinder if its diameter is not too great. Architects and engineers sometimes employ an instrument called a helicograph for drawing the spiral lines of Ionic capitals, springs, turbines, &c., that registered by Messrs Penrose and Bennett being one of the best.²

False spirals may be drawn in a clumsy way by combining quadrants of a circle of different radii, or by drawing a series of equi-distant concentric semicircles on one side of a straight line and then shifting the centre one division to the right or left before repeating the process on the opposite side of the line. This latter method seems to have been used by the painters of early Egyptian pottery, the concentric semicircles being made by means of a brush with teeth like a comb on the same principle that school-boys write their impositions with two or three pens fastened together side by side.

¹ T. G. Hall's *Differential and Integral Calculus*, p. 132.

² W. F. Stanley's *Mathematical Drawing Instruments*, p. 76.

Spiral ornament may in the first instance have been suggested by some of the numerous volutes which occur in nature, such as the tendril of the vine, a coiled snake, the horns of an animal, a curling lock of hair, a whirl-pool, or the curving over of a wave of the sea as it breaks upon the shore. On the early Greek pottery and goldsmiths' work from Mycenæ the tentacles of the cuttle-fish and the antennæ of the butterfly¹ are represented conventionally by spirals, and show a tendency to degenerate into geometrical ornament pure and simple.

In the savage art of the Trobriand Islands,² off the coast of New Guinea, there are instances of birds' heads degenerating into spiral decoration, and Mr Goodyear³ traces the origin of the Mycenæan spiral patterns and the Greek key-patterns to the lotus as conventionalised by the Egyptians, which first assumes a bell shape and then, by the curving over of the outer sepals on each side, eventually leads to forms resembling the Ionic capital.⁴

We do know, and can know, so little about the beginnings of art that it is impossible, in the absence of a well-authenticated series of dated specimens, to say whether certain geometrical patterns were derived from representations of natural objects, first highly conventionalised and then degraded by repetition and successive copying, or whether they had an entirely independent origin. Mr George Coffey believes that pictorial representation preceded decorative art, and he says, with regard to this, that "Ornament represents a higher stage in intellectual development; it means adaptation, arrangement, and relation of lines, symmetry, and co-ordination of parts. In fact, geometric patterns represent a very considerable intellectual advance as compared with imitative drawing. A higher stage is entered on when naturalistic representation is developed under conditioning limitations of art, when, in short, the subject is 'treated' and not merely imitated."⁵

¹ Schliemann's *Mycenæ*, pp. 71, 166, and 168; Perrot and Chipiez, *Art in Primitive Greece*, vol. ii. pp. 390 and 398.

² Prof. A. C. Haddon's "Decorative Art of British New Guinea," *Cunningham Memoir*, No. X., of the Royal Irish Academy.

³ *The Grammar of the Lotus*.

⁴ "The Origins of Prehistoric Ornament in Ireland," by George Coffey, in the *Journal of the Royal Society of Antiquaries of Ireland*, 5th ser., vol. iv. p. 359.

⁵ "The Origins of Prehistoric Ornament in Ireland," by George Coffey, in the *Journal of the Royal Society of Antiquaries of Ireland*, 5th ser., vol. iv. p. 357.

Nevertheless in the earliest examples of art which have survived in the carved bones and implements of the age of the reindeer and the mammoth, we find pure ornament side by side with the most spirited sketches of animals, without any intermediate process of transition from one to the other being apparent. It seems probable that decorative and pictorial art have from the very first existed side by side.

The essence of pattern-making consists in the repetition of certain forms in definite positions with regard to each other on the space to be ornamented. A love of methodical arrangement and order is characteristic of some races and individuals more than of others, and these will show a tendency to discard pictorial representations or to develop them into ornament. The geometrical or mechanical cast of mind is notoriously different from the artistic cast of mind. Hence some persons, although showing a positive distaste for picture-making, and an utter incapacity for drawing the human figure, may yet be possessed of a power of dealing with geometrical forms in such a way that they excel as decorators. This was the case with the Hiberno-Saxon illuminators, who were able to design patterns that have never been surpassed for their intricate beauty, whilst their attempts to copy the figure subjects in the Byzantine MSS. are only calculated to excite ridicule. Others, again, like the ancient Greeks, although masters of representing the human form, were quite content to borrow their ornamental patterns from Egypt and Assyria, and when the acanthus, the honeysuckle, the fret, and the volute once became stereotyped they did not think it worth while taking the trouble to invent any new decorative forms, or indeed modify those already existing.

The difficulty of deciding how any particular pattern may have arisen in the first instance is pointed out by Dr Hjalmar Stolpe in his essay on the "Evolution in the Ornamental Art of Savage Peoples,"¹ because, "when a series of developments *approaches* a certain well-known geometric motive, it quite simply incorporates the latter by reason of this relation."

Leaving the domain of speculation and coming to facts we find that, as far as negative evidence goes, the spiral does not appear to have been known to the palæolithic artists who produced the beautiful engraved

¹ Translated by Mrs H. Colley March, and published in the *Transactions of the Rochdale Literary and Scientific Society*, reprint p. 30.

bones found in the caves of the Dordogne and elsewhere. The earliest examples of the occurrence of the spiral in art are probably those found in Egypt¹ dating as far back as the time of the vth Dynasty (3589 to 3536 B.C.); and in the xviiith Dynasty (circa 1700 B.C.), we find the ceilings of the tombs at Karnac and elsewhere covered with highly developed key-patterns and spirals, showing that the principle of interlocking the spirals so as to completely cover a surface had been already mastered. Sir J. Gardner Wilkinson² suggests that the origin of the Greek frets and volutes may be traced to the designs on the ceilings of the Egyptian tombs, and since the discoveries of Dr Schliemann at Mycenæ this has been proved conclusively. The ceiling at Orchomenos³ is obviously a copy of an Egyptian ceiling pattern founded on the lotus.

The influence of the art of Egypt upon that of the early civilisations of the Ægean and Asia Minor in the pre-Hellenic period before the Dorian invasion (circa 1100 B.C.) may now be considered as an accepted fact. On the gold ornaments and sepulchral stelæ found at Mycenæ by Dr Schliemann, the spiral patterns are entirely divested of the lotus motive, and have become purely geometrical patterns. Nevertheless the discovery of the interlocking principle, which is necessary to enable a large surface to be covered with connected spirals, was due to the arrangement of the conventionalised lotus with its outer sepals curling over in definite positions with regard to each other on the ceilings of the Egyptian tombs. On one of the stelæ from the acropolis at Mycenæ⁴ the spirals are arranged in groups of four, and connected by S-shaped curves, and on another⁵ the spirals are in groups of six, and connected by C-shaped curves.⁶ On the fragment of a wooden box the spirals are arranged in a line with S-shaped connections. Some very characteristic Mycenæan patterns occur on the

¹ Prisse d'Arennes, *Histoire de l'Art Egyptien d'après les Monuments*; and Prof. W. M. Flinders Petrie's *Egyptian Decorative Art*, p. 18, and *Hist. of Egypt*, p. 79.

² *The Ancient Egyptians*, vol. i. p. 363.

³ Perrot and Chipiez, *Art in Primitive Greece*, vol. i. p. 518; Amelia B. Edwards, *Pharaohs, Fellahs, and Explorers*, p. 170.

⁴ Schliemann's *Mycenæ*, p. 81; the same pattern will also be noticed on the wine flagon on p. 232. Curiously enough, it crops up again in Celtic art on the base of one of the crosses at Castle Dermot, in Ireland.

⁵ *Ibid.*, p. 86.

⁶ *Ibid.*, p. 150.

circular gold plates found in the tombs, formed by a narrow band making convolutions round small circles arranged symmetrically.¹ The curved swastica of the same form as on the pre-historic rock sculptures at Ilkley in Yorkshire and Tossene in Sweden is also found at Mycenæ.²

In Northern Europe the spiral motive comes in with the Bronze Age, some of the most beautiful examples being on bronze axe-heads, sword hilts, cooking vessels, horns, gorgets, and other objects from Sweden³ and Denmark.⁴ The principle of combining the spirals in single rows or groups of threes and fours with **C** or **S**-shaped connections was perfectly well understood.

In Great Britain the instances of spiral ornamentation during the Bronze Age are far less numerous, and are confined almost exclusively to sculptured rocks and stones, and they are generally associated with cup and ring markings or sets of concentric circles without a central cup. The following are the chief specimens which are known :—

At Llanbedr, Merionethshire, a single spiral on a stone found amongst the *débris* of ancient habitations near Harlech.⁵

At Calderstones near Liverpool, on the stones of a megalithic circle, some isolated single spirals.⁶

At Maughanby, Cumberland, on one of the stones of a sepulchral circle, a single spiral branching out from the outer ring, a set of four concentric circles.⁷

At Auchnabreac, Lochgilphead, Argyllshire, on a rock surface polished by glacial action, a single and a double spiral connected by a **C**-shaped curve, associated with cup and ring markings.⁸

At Picaquoy, Orkney, on a stone from a Pict's house, a pair of spirals, similar to that at Auchnabreac, associated with two sets of three concentric circles and a very small cup or dot in the centre.⁹

¹ Schliemann's *Mycenæ*, p. 169. ² *Ibid.*, p. 259, and *Journal of Brit. Archaeol. Assoc.*, vol. xxxv. p. 15.

³ Dr Hans Hildebrand's *Industrial Arts of Scandinavia*, pp. 8 and 9.

⁴ J. J. A. Worsaae's *Industrial Arts of Denmark*, pp. 55, 61, 63, 64, and 67.

⁵ *Archæologia Cambrensis*, 3rd ser., vol. xiii. p. 155.

⁶ *Journal of the Brit. Archaeol. Assoc.*, vol. xxxix. p. 304.

⁷ Sir James Simpson's "Ancient Sculpturings," *Proc. Soc. Ant. Scot.*, vol. vi., Appendix, p. 18.

⁸ *Ibid.*, p. 56.

⁹ *Ibid.*, p. 40.

At La Mancha, Peeblesshire, on a slab of stone dug out of a bank, another similar pair of spirals, associated with several double concentric circles.¹

In the parish of Firth, Orkney, on a stone found in a wall, a single isolated spiral.²

At Newgrange, County Meath, Ireland, on three large stones at the base of the great tumulus and on two of the roofing slabs of the chamber, double and single spirals, associated with lozenges, chevrons, cups and rings, concentric rings and other patterns characteristic of the Bronze Age.³ Stone (*a*) at the west side of the mound has two double spirals and a single one upon it⁴; stone (*b*) at the north side of the mound has two single spirals joined by an **S**-shaped curve⁵; and stone (*c*) opposite the entrance to the passage leading to the chamber on the east side has seven or more double spirals upon it.⁶ The roofing slab on the right-hand stone of the entrance to the north recess has a group of three double spirals, and another roofing slab has a similar device partially concealed by the upright stone which supports it.⁷

The three spirals in the roofing slabs are not properly connected so as to be capable of being developed into surface ornament, but the general appearance of connection is given in a most ingenious way which is well worthy of careful study. Two of the spirals are joined together by **S**-shaped curves, whilst the third is entirely independent, the idea of connection being given by continuing the line forming the third spiral so as to inclose the other two. With regard to this, Mr Coffey says: "The method adopted at New Grange would seem to indicate that the artist was as yet unable to grapple with the complexity of interlocking spirals for running and all over treatment, and was feeling his way along the path of concentric curves, suggested perhaps in the first instance by the approximation of concentric circles, towards the final expression of form."⁸ The same kind of thing will be noticed on the elaborately decorated stone ball from

¹ Sir James Simpson's "Ancient Sculpturings," *Proc. Soc. Ant. Scot.*, vol. vi., Appendix, p. 62.

² *Ibid.*, p. 40.

³ George Coffey's monograph, "On the Tumuli and Inscribed Stones at New Grange, Dowth and Knowth," *Trans. of the Royal Irish Academy*, vol. xxx. p. 1.

⁴ *Ibid.*, p. 41.

⁵ *Ibid.*, p. 40.

⁶ *Ibid.*, pl. i.

⁷ *Ibid.*, p. 47 and pl. v. fig. 2.

⁸ *Ibid.*, p. 25.

Towie¹ in Aberdeenshire, now in the Edinburgh Museum. Mr Coffey also points out the resemblance between the patterns at New Grange and the decoration of the remarkable chalk drums found by Canon Greenwell in a barrow at Folkton, in Yorkshire.² Spirals often show a tendency to degenerate into concentric circles, and the two kinds of ornament are no doubt intimately connected, for, as we have seen, they nearly always occur together on the pre-historic sculptures of the Bronze Age in Great Britain. On early Greek painted pottery the process of the degradation of the spiral may be very clearly traced. First a row of double spirals connected by S-shaped curves are brought closer together, then the semblance of spirals is given by a row of concentric circles joined by sloping tangential lines, and lastly the tangents are omitted altogether.

We have shown that the true principle of covering a surface with properly interlocking spirals was not understood by the Bronze-Age people in this country as it was in Scandinavia and Mycenæ, which would seem to indicate that spiral forms of decoration had an entirely independent origin in Great Britain, and were developed on different lines altogether.

Now comes the question whether the divergent spirals of the Iron Age were lineally descended from the spirals of the Bronze Age. On the whole we are inclined to think they were not. With the exception of the unique incised spirals on the sepulchral chamber at Clover Hill,³ County Sligo, it would be difficult to point to any transitional forms between the New Grange sculptures and the "Late-Celtic" metal-work.

Since the discovery in 1886 of the "Late-Celtic" cemetery by Mr Arthur Evans at Aylesford,⁴ and the more recent explorations of the Glastonbury⁵ Marsh Village by Mr A. Bulleid, our ideas as to the probable origin of this peculiar style of art have been considerably modified. Sir A. Wollaston Franks⁶ many years ago was able to give an approximate date in the first or second century B.C. to the "Late-Celtic" objects found in Great Britain, and to show their obvious similarity with those from Hall-

¹ *Proc. Soc. Ant. Scot.*, vol. iii. p. 439.

² *Archæologia*, vol. lii. p. 25.

³ *Journ. Royal Hist. and Archæol. Assoc. of Ireland*, 4th ser., vol. v. p. 538.

⁴ "On a Late-Celtic Urn-Field at Aylesford in Kent," *Archæologia*, vol. lii. p. 1.

⁵ "The British Lake-Village near Glastonbury," *Glastonbury Antiquarian Society, Taunton*, 1895.

⁶ *Horæ Ferales*.

stadt and other places on the Continent. Then came the finds at La Tène¹ in Switzerland, which gave a generic name corresponding to "Late-Celtic" in this country; and it is now possible to establish, by a direct chain of evidence, the relation between the Italo-Greek art of Northern Italy and the "Late-Celtic" art of Great Britain. The finding in the Aylesford urn-field of an Italo-Greek cœnochoë and patella of purely foreign workmanship, probably of the first century B.C., associated with a "Late-Celtic" situla and tankard, proves that at this period there must have been considerable intercourse with the art centres of Europe, and therefore that there is no inherent improbability in the metal-workers in this country having been influenced by those abroad or by imported objects. Mr Arthur Evans expresses his belief that the volute flower pattern on the metal mountings of the Aylesford bucket is simply a modification of the Greek anthemion² or honeysuckle, and we think that no one who has really studied the matter can doubt that this is really the case. The Greeks derived the honeysuckle pattern either from the Egyptian lotus, as argued by Mr Goodyear,³ or from the sacred palm of Assyria, as Dr Bonavia⁴ contends, and it is used very largely in Greek and Etruscan art in combination with the acanthus and a flower with a bell like that of a convolvulus. The borders round the Etruscan bronze mirrors⁵ afford excellent examples of running patterns embodying these motives.

The trumpet-like shapes which are so characteristic of "Late-Celtic" work in Great Britain may have been suggested either by the honeysuckle or by the expanded portion of the stems of the running foliage where two branches bifurcate. The peculiar ridge along the middle of the trumpet-like forms in repoussée metal-work is apparently copied from the honeysuckle as represented in relief in sculpture.

The ornament on the objects of "La Tène" type found on the Continent, as, for instance, on the helmet from Berru⁶ (Marne) in the St Germain's Museum and on the spear-head from Port,⁷ between Nidau and Meyenried on the Lower Thielle, Switzerland, is clearly derived from foliage of the

¹ V. Gross' *La Tène, un Oppidum Helvète*.

² *Archæology*, vol. lii. p. 56.

³ *Grammar of the Lotus*.

⁴ *The Flora of the Assyrian Monuments*.

⁵ E. Gerhard's *Etruskische Spiegel*, pls. 229, 299, 389, &c.

⁶ A. Bertrand's *Archéologie Celtique et Gauloise*, 2nd ed., p. 356.

⁷ Dr Munro's *Lake Dwellings of Europe*, p. 546.

description which occurs on the Etruscan bronze mirrors. The acanthus still survives in the designs finely engraved on the repoussée metal-work in England, notably on the shield from the River Witham¹ and the shield boss from the Thames at Wandsworth² (both in the British Museum), and on the sword sheath from the River Witham³ in the Alnwick Museum. Running scrolls of foliage like those on the repoussée shield boss from the Thames at Wandsworth, just mentioned, were executed also by engraved lines consisting of combinations of arcs of circles. Two beautiful instances of this are to be seen on the sword sheath from the Lisnacrogghera⁴ Crannog in Ireland (now in the British Museum) and on the wooden tub recently found by Mr A. Bulleid at the Glastonbury⁵ marsh village. The centres from which the circles were drawn are still clearly visible on the Lisnacrogghera sword sheath, as also on the bone objects found in one of the chambered cairns at Slieve-na-calliagh,⁶ County Meath, but they are so ingeniously combined that there are none of the ugly broken-backed curves which invariably result from the attempts of the modern designer to substitute arcs of circles for free hand curves. On the "Late-Celtic" bronze mirrors, where this kind of circular work is very largely used, the idea of foliage is quite lost and the ornament is purely geometrical. The two most perfect and beautiful mirrors exhibiting these circular patterns were found at Trelan Bahow,⁷ in Cornwall (now in the British Museum), and Birdlip,⁸ in Gloucestershire (now in the Gloucester Museum).

To sum up: "Late-Celtic" ornament appears to be a local development of Italo-Greek foliaceous scroll-work resulting from the Gaulish tribes coming into contact with classical civilisation during the two or three centuries preceding the Christian era. The foliaceous origin of the "Late-Celtic" work is less apparent in the south of England than in the "La Tène" work on the Continent, and in countries still more remote from Northern Italy and Gaul, like Ireland, Wales, and Scotland, the idea of foliage disappears entirely.

¹ *Archæologia*, vol. xxiii. p. 96.

² *Hora Ferales*, p. 192.

³ Dr J. C. Bruce's *Catalogue of Antiquities at Alnwick*, p. 68.

⁴ *Proc. Royal Hist. and Archæol. Assoc. of Ireland*, 4th ser., vol. vi. p. 385.

⁵ *The Antiquary* for 1895, p. 112.

⁶ E. A. Conwell's *Discovery of the Tomb of Ollamh Fodhla*, Appendix, p. 53.

⁷ *Archæological Journal*, vol. xxx. p. 268.

⁸ *Journal of the Bristol and Gloucester Archæol. Soc.*, vol. v. p. 137.

It is perhaps hardly fair to say that the foliage has become degraded into geometrical ornament, because the curves of the flamboyant trumpet-like forms of the "Late-Celtic" work are in their way far more beautiful than the designs from which they were adapted. Nevertheless, the long sweeping curves of the "Late-Celtic" work appear to have been derived from the undulations of the stems of running scrolls of foliage of classical origin. Whilst the stems were unduly exaggerated by terminal and other expansions, the leaves diminished until eventually the foliage became merged in extremely graceful but purely geometrical curves. The



No. 1022c.—Circular Bronze Disc of unknown use found in Ireland, now in the British Museum.

so-called divergent spirals of the "Late-Celtic" style have really more in common with flamboyant ornament than with the regular interlocking and closely-coiled spirals of the Bronze Age in Scandinavia, the stelæ and goldsmith's work of the Ægean, and the tomb ceilings of ancient Egypt.

Towards the end of the "Late-Celtic" period and the beginning of the Christian period we find the flamboyant curves arranged symmetrically within circles as on the Elveden¹ tankard belonging to Mr H. Prigg and

¹ *Archæologia*, vol. lii. p. 45.

on round disc brooches from the caves at Settle¹ in Yorkshire, Brough Castle² in Westmoreland, Silchester,³ and elsewhere, but without any closely coiled spirals being introduced.

Probably the earliest instances of the closely coiled spiral combined with the divergent flamboyant work of the "Late-Celtic" period occur on certain circular metal discs ornamented with enamel, of which examples have been found in a tumulus on Middleton Moor,⁴ Derbyshire; Chester-ton,⁵ Warwickshire; Greenwich,⁶ near London; and near Oxford.⁷ Circular ornaments of a similar character occur on bowls from Lullingstone,⁸ Kent;



No. 1022D.—Circular Enameled Discs and Stag from Chesterton, Middleton Moor, Greenwich, and Lullingstone.

and Gate Ford,⁹ Needham Market, Suffolk. There is also another in the British Museum which was obtained from the Crossthwaite Museum, but

¹ *Hist. Soc. of Lancashire and Cheshire*.

² *Proc. Soc. Ant. Lond.*, 1st ser., vol. iv. p. 129.

³ Now at Strathfieldsaye House.

⁴ *Archæologia*, vol. ix. p. 189; Bateman's *Vestiges of the Antiquities of Derbyshire*, p. 25.

⁵ *Archæological Journal*, vol. ii. p. 161; *Journal of the Brit. Archæol. Assoc.*, vol. iii. p. 282.

⁶ *Proc. Soc. Ant. Lond.*, 2nd ser., vol. ii. p. 202.

⁷ In collection of Gen. Pitt Rivers.

⁸ Westwood's *Miniatures*, pl. 53; *Archæologia Cantiana*, vol. iii. pl. 1.

⁹ Rubbings of the ornament on this bowl were exhibited at one of the meetings of the Brit. Archæol. Assoc.

the locality where it was found is unknown. These appear to afford the connecting link with the spiral decoration of the Hiberno-Saxon MSS. and early sculptured stones of Ireland and Scotland, for we find exactly the same designs, where circular spaces require to be decorated, as in the ornamental centres of spirals in the Books of Kells, Durrow, Lindisfarne, and the Paris Gospels; and in the medallions in the Tables of Eusebian Canons in the Stockholm Gospels and the Book of Kells; in the border round one of the miniatures in the St Gall Gospels; in the centres of the crosses on some of the sepulchral slabs at Clonmaenois,¹ and on the Maiden Stone, in Aberdeenshire. Unfortunately, the circumstances under which the enamelled metal discs have been found do not afford any clue to their exact age, nor has their use been satisfactorily ascertained. They may, however, possibly have formed portions of the decorations of bowls like those at Lullingstone, Needham Market, Wilton House, Wilts, and others found in Norway, as suggested by Dr Ingvald Undset in his article on "Petites Études sur le Dernier Age de fer en Norvège," in the *Memoires de la Société des Antiquaires du Nord* for 1890, p. 33. The discs found at Chesterton were in two pairs with hooks for suspension attached to them. A circular disc of a somewhat similar kind in the Museum of the Royal Irish Academy is called a cloak fastener in Sir William Wilde's *Catalogue* (p. 566). The British Museum authorities place the disc from the Crossthwaite Museum in the Saxon Room.

The chief ways in which the flamboyant designs of the Pagan "Late-Celtic" style were modified, after the introduction of Christianity into Great Britain, were (1) by making the closely coiled spiral a more important feature, and (2) by distributing them in a more regular and symmetrical manner over the surface to be decorated. At the same time, the trumpet-like expansions of the divergent portions of the spirals and almond-shaped figures formed by the meeting of the ends of the trumpets were retained. Two other ornamental features which are characteristic of the "Late-Celtic" metal-work, namely, the rosette and a small circle inclosing three almond-shaped figures,² were retained in the decoration of the Hiberno-Saxon MSS.

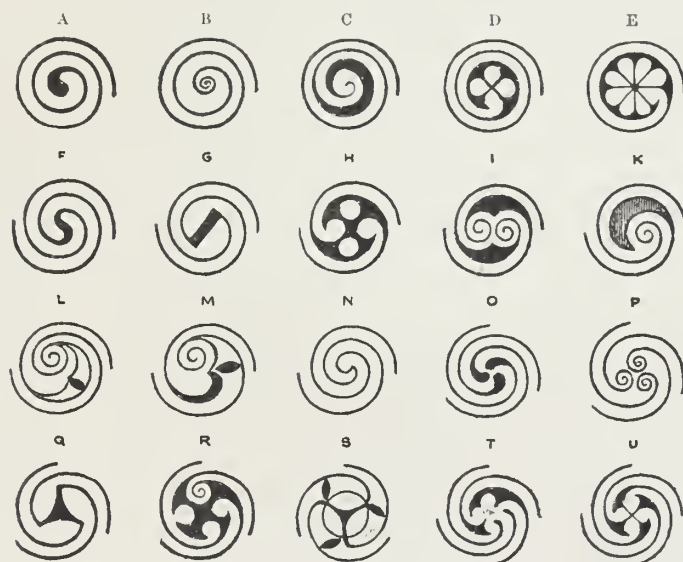
Spiral-work is almost unknown on the early Christian monuments of

¹ Petrie's *Inscriptions in the Irish Language*, vol. i. pl. 39.

² These occur on the shield from the River Witham (*Archæologia*, vol. xxiii. p. 96), on the dagger from the Witham belonging to Mr H. Thorold (*Horæ Ferales*, p. 192), on the

England and Wales, being found in its greatest perfection on the sculptured stone-work and metal-work of Ireland and Scotland and in the Hiberno-Saxon MSS. of the best period, say from A.D. 600 to 900.

There are, broadly speaking, two distinct forms of spiral patterns used in Celtic art—(1) where the band of which the spiral is formed gradually expands into a trumpet-shaped end; (2) where the band of which the spiral is formed remains the same breadth throughout its whole length. The first of these forms is the earlier of the two, and is copied directly from the metal-work of Pagan times. The expanding spirals are so



No. 1023.—Methods of Ornamenting Centres of Spirals, from the Stockholm Gospels and the Book of Durrow.

arranged as to leave three-sided spaces (bounded by the various curves), which form the groundwork, and are ornamented with small circles, triangles, and almond-shaped figures, left white on a coloured or black ground. The spirals are not all of equal size, and their centres are not generally arranged symmetrically (No. 1032).

In the case of the second form of spiral-work, which is composed of bands of unvarying width, and is later, there is only left a plain black

Balmaclellan mirror (*Proc. Soc. Ant. Scot.*, vol. vii. p. 349), and also in the Stockholm Gospels, the Psalter (Vesp., A. i) in the British Museum, the Book of Durrow, and the St Gall Gospels.

ground. This class of spiral-work is shown on Nos. 1026 to 1029, and, as has been already explained, there is a corresponding key-pattern to each,¹ the spirals being composed of straight lines making bends at right angles, instead of being curved. The centres of the spirals are all placed symmetrically at the corners of squares, and the space occupied by each spiral is the same size.

In Celtic art the spirals are generally composed of several bands diverging from one point: thus there are single spirals (No. 1023A), double spirals (No. 1023F), triple spirals (No. 1023o), quadruple spirals (No. 1023i), and so on. Each kind of spiral can have a different direction of twist, or in other words, can be right or left-handed. There are different ways of coiling the band forming the spiral; if the bands are near together it is closely coiled, and if far apart loosely coiled. A spiral may either proceed from a central point, or there may be a circle in the middle. The various methods of ornamenting the centres of spirals are shown on No. 1023, and also in Nos. 1035 and 1036; in the latter case the central circle from which the spiral starts is ornamented with a large number of other spirals. Sometimes the centres of the spirals are formed of birds' heads,² or figures of men with interlaced limbs.³ When the centre of a spiral is not highly ornamented it generally starts from a pear-shaped black spot. It is closely coiled at the beginning, after which the bands get further apart, and then round the edge there are generally a few coils very close indeed; finally, the band diverges at a tangent. After divergence the band expands in width, having a trumpet-shaped end, which joins on to the trumpet-shaped end of the next, leaving a black almond-shaped space between the two.

The variations in this class of spiral-work are made—(1) by altering the number of bands of which the spiral is composed, making it single, double, triple, or quadruple; (2) by making the spiral right or left-handed;

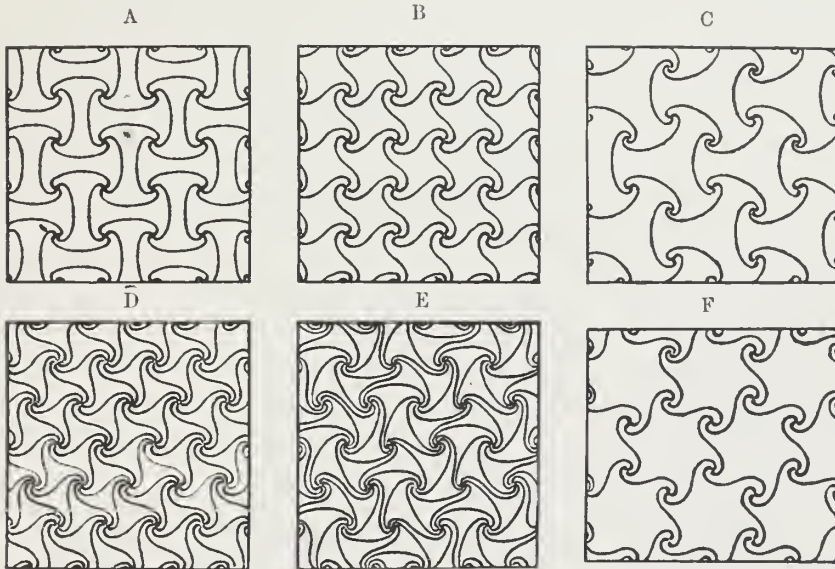
¹ The relation existing between each spiral-pattern and its corresponding key-pattern was perceived by the Egyptian decorators, and the transition from the lotus spiral-patterns to the Greek fret is very clearly seen in the design of the ceiling of Tomb No. 33, at Abd-el-Kourneh, Thebes (*Grammar of the Lotus*, p. 96 and pl. 10); see also Flinders Petrie's *Egyptian Decorative Art*, p. 37.

² On stones at St Vigean's and Birnie (Stuart, vol. i. pls. 42 and 70), and in the Book of Kells (*Palaeog. Soc. Publ.*, pl. 55).

³ In the Book of Kells (*Palaeog. Soc. Publ.*, pl. 89).

(3) by the methods of coiling the spiral closely or loosely at different parts of the curve ; (4) by having ornamental centres ; (5) by the ways of arranging the centres of the spirals relatively to each other ; (6) by the ways of connecting the spirals together so as to form one design ; (7) by the different ornamental backgrounds.

Nos. 1024A to 1024F show the symmetrical ways of arranging the centres of spirals relatively to each other, and of connecting them together. The symmetrical ways of arranging the centres of spirals are founded on the fact previously mentioned, that squares, equilateral triangles, and hexagons are the only regular plane figures which will entirely cover a surface, in whatever position the figures are placed, so that their corners



No. 1024.—Methods of arranging and connecting Spirals symmetrically.

meet round a point and their sides touch. There are only two ways of connecting together two adjacent spirals. If the two spirals have an opposite direction of twist, the curve will be C-shaped ; but if they have the same direction of curve, it will be S-shaped.

No. 1024A has the centres of the spirals arranged on the square system, and connected by C-shaped curves, the twists of the spirals being alternately right and left-handed.

No. 1024B has the centres of the spirals arranged upon the square system, and connected by **S**-shaped curves, all the spirals having the same direction of twist.

No. 1024c has the centres of the spirals arranged upon the hexagonal system, and connected by **C**-shaped curves.

No. 1024D has the centres of the spirals arranged upon the triangular system, and connected by **S**-shaped curves.¹

No. 1024E has the centres of the spirals arranged upon the triangular system, and connected by **C** and **S**-shaped curves alternately.

No. 1024F has the centres of the spirals arranged upon the hexagonal system, and connected by **S**-shaped curves.



No. 1025.—Methods of connecting two Spirals.

Nos. 1023A to 1023U show the various ornamental forms of centres for spirals. Nos. 1023A to E are single spirals; Nos. 1023F to N are double spirals; Nos. 1023O to S are triple spirals; and Nos. 1023R and U are quadruple spirals.

Nos. 1025A and 1025B show the methods of connecting the expanded ends of the first system of spirals. **S**-shaped connecting curves are avoided almost entirely in Celtic spiral-work, either by introducing a fresh spiral (generally a smaller one, and forming part of the background) between the two to be joined, or by the curious hook-shaped termination

¹ A gold plate with a spiral pattern formed on this system is given in Schliemann's *Mycene*, p. 311.

shown on No. 1025A. Sometimes three spirals are connected in this way, the third band hooking over the other two, and in fact forming a kind of incipient spiral. On No. 1037 there will be seen an instance of an S-shaped connection.



No. 1026.—Spiral Pattern on the Font at Deerhurst, Gloucestershire.

No. 1025A gives the method of connecting two spirals whose directions of twist are the same.

No. 1025B gives the method of connecting two spirals whose directions of twist are opposite.

Nos. 1027 to 1029 show the second or later class of spiral-work arranged so as to cover a surface. All the bands are here of equal width, and there is no ornamental background.



No. 1027.



No. 1028.



No. 1029.

Spiral Patterns, set out on the square system.

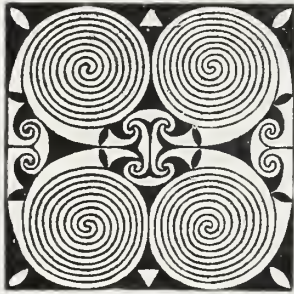
No. 1026 is set out on the square system, the spirals being quadruple and joined by C-shaped curves (No. 1024A). The diagram shows three out of eight panels surrounding the font at Deerhurst, in Gloucestershire.

No. 1027¹ has the centres of the spirals arranged as in No. 1026, but with the setting out squares placed diagonally, and connected by C-shaped curves, as shown on No. 1024A. The spirals are composed of four bands.

No. 1028² is set out on the square system, and the spirals branch out on each side of lines running in a zigzag direction diagonally across the paper. The spirals are composed of a single band. The pattern is formed exactly upon the same principle as the key-pattern (No. 914), except that in one case the spirals are composed of curved lines and in the other of straight lines.

No. 1029³ is formed like No. 1028, only with spirals of two bands instead of only one, and the setting out lines are placed diagonally with regard to the margin. Compare with key-pattern (No. 972).

Nos. 1030 and 1031 show the methods of filling in squares with the first or earlier class of spiral-work. The centres are all arranged symmetri-



No. 1030.



No. 1031.

Squares filled in with Spiral-Work, from Book of Kells.



No. 1032.

Spirals with ornamental background, from Book of Durrow.

cally upon the square system, and joined by C-shaped curves. Variety is effected by making some of the spirals large, with a great number of coils of fine lines, and others small, with only a few coils. The triangular spaces

¹ Occurs at Rosemarkie (No. 2), Ross-shire; Bradford on Avon, Wilts; Penally, Pembroke-shire; and Llanddewi Aberarth, Cardiganshire.

² Occurs at Meigle (No. 4).

³ Occurs at Drainie (No. 2) and Lemanaghan, King's Co.

of the background are ornamented with white circular, triangular, and almond-shaped figures.

No. 1032 shows the method of ornamenting the spandrils on spaces left between the larger spirals which form the background.

Nos. 1033 and 1034 show the methods of filling in circles with spiral ornament.

No. 1033 has a triple spiral in the centre connected by C-shaped curves with three other triple spirals arranged symmetrically round it. The remaining spaces are filled in with three smaller double spirals connected to the three larger ones by an S-shaped curve, and the hook-shaped form shown on No. 1025A.



No. 1033.



No. 1034.

Circles filled in with Spiral-Work, from St Gall and Stockholm Gospels.

No. 1034 has a quadruple spiral in the centre connected by C-shaped curves, with four triple spirals arranged symmetrically round it, the four outer circles being connected together by the hook-shaped form shown on No. 1025A.



No. 1035.



No. 1036.

Ornamented Centres of Spirals from the Book of Durrow.

Nos. 1035 and 1036 show the large ornamental circular centres from which other spirals diverge in three directions and cover the space outside

the circles. These examples are from the Book of Durrow,¹ and other very elaborate specimens may be found in the Book of Kells,² in the Lindisfarne Gospels,³ in the Irish Gospels at Paris, and on the Tara and Hunterston brooches and the Andagh chalice.

No. 1035 is the ornamental centre of a triple spiral, composed of three large and three small spirals arranged symmetrically round a central one. The three small outer spirals are connected with the one of which this is the ornamental centre by a hook-shaped form, as shown on No. 1025A. All the other connections are C-shaped.

No. 1036 is the same as No. 1035, except that the three small outer spirals are omitted.

No. 1037 is from the "Quoniam quidem" Initial page in the Book of Durrow,⁴ and is given as an example of spiral-work filled into an irregular space. The centres of the spirals are disposed irregularly, and connected



No. 1037.

Spiral-Work from Initial Letter in the Book of Durrow.



No. 1038.

No. 1039.

Spiral Border Patterns.

by S, C, and hook-shaped curves. The background is ornamented in the usual way. Spiral-work is especially adapted to fitting into irregular spaces, as the size of the spirals may be altered at pleasure. It is also well suited to the forms of curved letters, such as the Q, which begins the Gospel of St Luke in Latin.

¹ Westwood's *Miniatures*, pl. 7; also copied into Stuart's *Sculptured Stones*, vol. ii.

² *Palæog. Soc. Publ.*, pls. 55 and 58

³ *Palæog. Soc. Publ.*, pls. 4, 5, 6, and 22.

⁴ Westwood's *Miniatures*, pl. 6.

No. 1038 is a border pattern composed of right and left-handed double spirals alternately connected by C-shaped curves.

No. 1039 is a border pattern composed of double spirals of the same direction of twist connected by S-shaped curves.

No. 1040 is one half of the semicircular border round the miniature of David, in the so-called Psalter of St Augustine (Brit. Mus. Vesp., A. i.).



No. 1040.—Half of a Semicircular Border of Spiral-Work, from the Psalter of St Augustine.



No. 1041.

No. 1041 is a design by the Author founded on the method of arranging and connecting spirals, as shown in No. 1024E.

Analysis of Spiral Ornament, with the Localities where each Pattern occurs.

Notwithstanding the apparent complex arrangement of the lines in spiral ornament, it will be found that, once the principle of setting out the pattern so as to completely cover any given surface is fully mastered, the designer's task is a comparatively simple one. All that he has to do is to place a series of circles in definite positions with regard to each other, and connect them together in pairs by means of **C** or **S**-shaped curves, according to whether the twist of the pairs of spirals is in opposite directions or in the same direction. The circles are then filled in with spirals by continuing the **C** or **S**-shaped curves until they reach the centre. The curves must be tangential to the circles and the spirals will be single, double, triple, quadruple, &c., according to the number of curves which touch the circle. In Celtic ornament a distinct preference is shown for triple spirals, and the number of curves converging towards one centre never exceeds six, and very seldom four. In the following diagrams (with a few exceptions) the circles and connecting curves only are shown, the spirals being omitted.

Isolated Spirals.

The most primitive kind of spiral decoration is that in which the spirals are isolated, that is to say, they occur by themselves without any connecting curves. Examples of this belonging to the pre-historic period have already been mentioned at Llanbedr, Merionethshire; the Calderstones, Lancashire; and Firth, in Orkney.¹

Spirals connected together in Pairs or Groups of Three.



Eday, Orkney (stone from Pict's house).
Lilbourne Hill Farm, Northumberland
(stone from pre-historic grave).
Hollows Tower, Eskdale, Dumfriesshire
(door-sill of vault).

No. 1041A.—A pair of single spirals connected by a **C**-shaped curve.

¹ Isolated spirals also occur on rock sculptures at Morwick on the south bank of the Coquet, near Warkworth (see *Proc. Berwickshire Naturalist Club*, vol. x., 1882-84, p. 343), and on Blackshaw Rock in the Kilbride district of Ayrshire (see J. Smith, *Ayrshire in Pre-historic Times*, p. 20).

ANALYSIS OF SPIRAL ORNAMENT, WITH THE LOCALITIES—*continued*.



No. 1041b.—A single spiral and a double spiral apparently connected by a C-shaped curve, but in reality one end of the C is continued round the second spiral, so as to enclose it.

Achnabreac, Argyllshire (rock sculpture).



No. 1041c.—A group of three double spirals connected by S-shaped curves. Only two of the spirals are really connected together; the ends of the two bands forming the third spiral are continued round the other two, so as to completely enclose them, and thus suggest a connection which does not really exist (see diagram No. 1086).

Newgrange, Co. Meath (roofing slab of chambered tumulus).

Terminal Spirals.

On the upright cross-slabs of Scotland and the Isle of Man, and on the recumbent cross-slabs of Ireland, the arms and shafts of the crosses sometimes have spiral terminations. Perhaps the earliest example of this is to be found on a rude pillar stone at Reask,¹ County Kerry, and at Kilmalkedar in the same county.² Crosses with shafts or arms having spiral terminations occur on the slabs of Boisse, Thuathal, Ferdamnach (A.D. 870), and Charthach (A.D. 885) at Clonmacnois, King's County, and on the slab of St Berichtir (A.D. 839) at Tullylease, County Cork,³ and on the cross of Fritha at Kirk Michael, and on a cross at Kirk Onchan, both in the Isle of Man.⁴

¹ Petrie's *Christian Inscr. in the Irish Language*, vol. ii. pl. 4; and *Archæologia Cambrensis*, 5th ser., vol. ix. p. 147.

² *Arch. Camb.*, 5th ser., vol. ix. p. 146.

³ Petrie's *Christian Inscr.*, vol. i. pls. 9, 14, 20, 23, 42, and vol. ii. pl. 30.

⁴ Cumming's *Runic Remains of the Isle of Man*, pls. 4 and 6. In these two cases spirals are also introduced on each side of the top of the shaft of the cross, where it joins the head.

ANALYSIS OF SPIRAL ORNAMENT, WITH THE LOCALITIES—*continued*.

Crosses similarly treated exist in Scotland at Dunblane (No. 1), Tullibole, Aboyne, Dyce, Alyth, Gask, Logierait, and St Vigean's (No. 7).

Conventional Spirals on Men, Animals, &c.

The details of men, animals, and inanimate objects are frequently conventionalised in Celtic art by converting them into spirals. The commonest use of the spiral for this purpose is to indicate the junction between the legs and the body of a quadruped, as on the crosses and upright cross-slabs at Kirk Andreas, Kirk Michael, Kirk Onchan, and Kirk Braddan, in the Isle of Man;¹ on the tympanum at St Nicholas, Ipswich;² and in the Book of Durrow.³ The creatures used as symbols, or at any rate associated with symbols, in Scotland are similarly decorated with conventional spirals, the ones on which this treatment will be specially noticed being the so-called elephant, the bull (at Burghead), the boar (at Knocknagael), the lion (?) (at Papil), the horse (at Inverury), the stag (at Grantown), the wolf (?) (at Ardross).

Sometimes the junction of the ear of a beast with its head is made an excuse for introducing spirals, as at Rosemarkie (No. 3) and St Madoes (No. 1); or the details of an angel's wings, as at Glamis (Nos. 1 and 2) and at Eassie; or the constructive joints of the parts of a chair, as at Dunfallandy.

Spirals thus used conventionally occur on stones with sculpture in relief at the following places in Scotland:—

Rosemarkie, No. 3.	St Vigean's, No. 10.
Brodie.	„ No. 19.
Glamis, No. 1.	Dunfallandy.
„ No. 2.	Gask.
Monifieth, No. 2.	St Madoes, No. 1.
Woodwray.	Meigle, No. 4.
Eassie.	„ No. 9.
Invergowrie.	„ No. 26.
St Vigean's, No. 7.	Forteviot, No. 1.

¹ Cumming, pls. 2, 3, 4, 6, and 8.

² J. R. Allen's *Early Christian Symbolism*, p. 385.

³ Westwood's *Miniatures*, pl. 5.

ANALYSIS OF SPIRAL ORNAMENT, WITH THE LOCALITIES—*continued.*

Spiral Ornament filling Rectangular Spaces (Nos. 1042 to 1071).

Single Borders.



No. 1042.—One row of single spirals not connected together.

Dunblane, No. 1.

England—
Bakewell, Derbyshire.



No. 1043.—One row of double spirals connected by S-shaped curves, with other curved lines branching out on one side from the middle of each S.

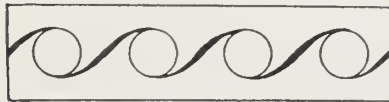
Isle of Man—
Kirk Onchan.



No. 1044.—One row of single spirals connected by C-shaped curves.

St Vigean's, No. 14.

Ireland—
Clonmacnois.
Kilklispeen.



No. 1045.—One row of double spirals connected by S curves.

Golspie.
Kilbar.
Aberlemno, No. 3.
Cossins.
Strathmartine, No. 2.
Carpow.
Abercromby, No. 1.

Ireland—
Castle Dermot.
Tuam.
Cormac's Chapel, Cashel.

MSS.—
Paris Gospels.

Egypt—
Scarabs of Usertesen I.

Greece—
Treasury of Atreus.

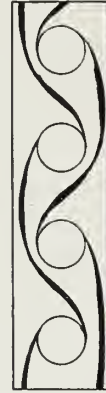
Scandinavia—
Axe-heads, &c., of Bronze Age found in
Sweden.

ANALYSIS OF SPIRAL ORNAMENT, WITH THE LOCALITIES—*continued.*

No. 1046.—One row of double spirals connected by **C** and **S** curves alternately.



No. 1047.—One row of double spirals, first connected in pairs by **S** curves and then each pair connected by larger **S** curves extending over four spirals.



No. 1048.—One row of double spirals each connected by an **S** curve with the next spiral but one, thus forming in reality two distinct sets of connected spirals having the appearance of a single row.

Egypt—

Scarab (Flinders Petrie's
Egyptian Dec. Art,
No. 30).

Egypt—

Scarab (Flinders Petrie's
Egyptian Dec. Art,
No. 26).

Woodwray.

Scandinavia—

Bronze Shield-plate in
Copenhagen Museum
(Worsaae's *Oldsager,*
p. 44).

Borders composed of Large and Small Spirals.

Note.—When the spirals are not closely coiled, but assume the shape shown on No. 1025A, they are not indicated by circles on the diagrams, but by *hooks*.



No. 1049.—A row of large triple spirals alternating with a row of single spirals on one side and hooks on the other, all connected by **C** curves.

Metalwork—
Tara brooch.

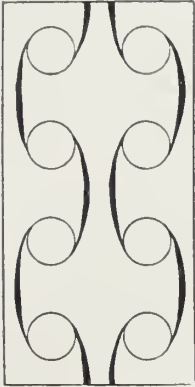


No. 1050.—A row of quadruple spirals alternating with hooks on each side, all connected by **C** curves.

Metalwork—
Ardagh Chalice.
Crucifixion Plaque, Mus. R.I.A.

ANALYSIS OF SPIRAL ORNAMENT, WITH THE LOCALITIES—*continued.*

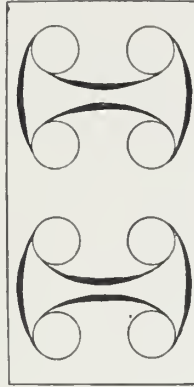
Double Borders.



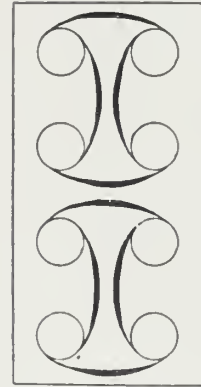
No. 1051.—Two rows of double spirals, each row being independent of the other and connected only in one direction by C curves.

Dupplin.

Ireland—
Castle Dermot.



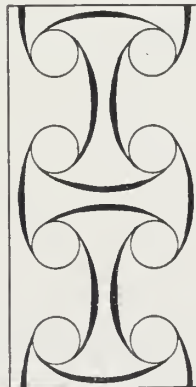
No. 1052.—Two rows of double spirals forming a series of independent groups of four connected by C curves both horizontally and vertically.



No. 1053.—The same as No. 1052, but with each group of four spirals placed in a different position.

Skinnet.

Ireland—
Clonmacnois.



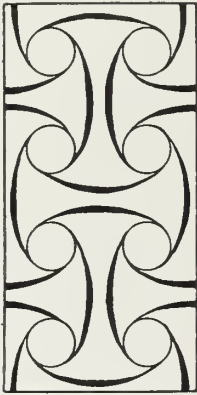
No. 1054.—Two rows of triple spirals connected by C curves running horizontally and vertically.

Farr.
Burghead, No. 8.
St Vigean's, No. 2.
Dupplin.
Meigle, No. 27.
" No. 28.

St Andrews, No. 6.
" No. 11.
" No. 12.
" No. 13.
" No. 18.
Minnigaff.

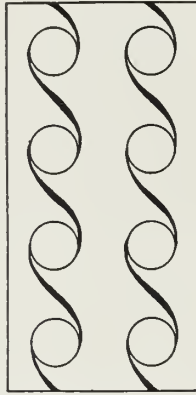
Ireland—
Boho, Co. Enniskillen.
Termonfechin.

MSS.—
Book of Kells.
St Gall Gospels.

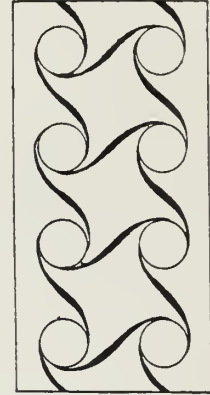
ANALYSIS OF SPIRAL ORNAMENT, WITH THE LOCALITIES—*continued.*

No. 1055.—The same as No. 1054, except that the spirals are made quadruple by introducing **C** curves extending to the margin, thus converting it into a surface pattern.

Shandwick.
Elgin.



No. 1056.—Pattern formed by doubling No. 1045.



No. 1057.—The same as No. 1056, but with triple spirals and **S** curves running both horizontally and vertically.

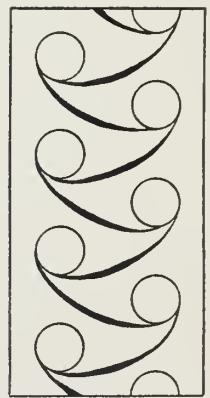
Ireland—
Moone Abbey.
Scandinavia—
Bronze Axe-head, Sweden
(Hildebrand's *Indus.*
Arts, p. 8).



No. 1058.—The same as No. 1057, but with quadruple spirals and additional **S** curves extending to the margin, thus converting it into a surface pattern.



No. 1059.—Two rows of triple spirals connected horizontally by **C** curves and vertically by **S** curves.



No. 1060.—Two rows of double spirals, but with the centres of the spirals in one row opposite the middle of the interval between the centres of the spirals in the other row. This pattern is founded by rights on the triangular system of setting-out lines, not on the square system.

Woodray.

Egypt—
Scarab (Flinders Petrie's
Dec. Art, fig. 31).

ANALYSIS OF SPIRAL ORNAMENT, WITH THE LOCALITIES—*continued.*



No. 1061.—Two rows of double spirals arranged as in No. 1060, but connected by S curves.



No. 1062.—Two rows of triple spirals arranged as in No. 1060, but connected by additional S curves. This pattern could also be obtained by distorting No. 1057.



No. 1063.—The same as No. 1062, but with quadruple spirals connected by additional S curves (compare with No. 1024D).

Egypt—

Scarabs and painting
(Flinders Petrie's *Dec. Art*, figs. 28 and 49).

Greece—

Mural paintings at Tiryns.

Ireland—

St Vigean's, No. 14.
Cormac's Chapel, Cashel.

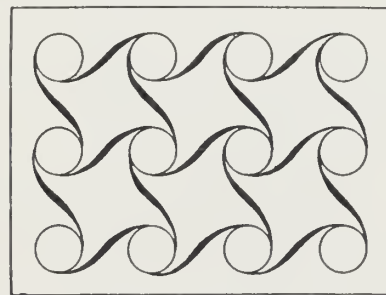
Egypt—

Scarab (Flinders Petrie's
Dec. Art, fig. 40).

Rectangular Panels with Spirals arranged in Rows.



No. 1064.—Surface pattern corresponding to border pattern No. 1055.



No. 1065.—Surface pattern corresponding to border pattern No. 1057. It will be noticed that the spirals round the margin are triple whilst the remainder are quadruple.

England—

Font at Deerhurst, Gloucestershire (see No. 1026).

Ireland—

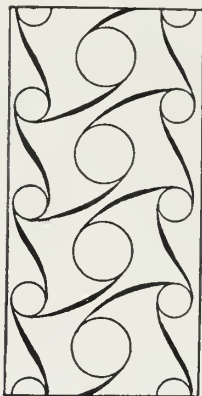
Castle Dermot.
Greece—
Stela No. 2 from the Acropolis at Mycenæ.
Ceiling at Orchomenos.

Scandinavia—

Bronze axe from Denmark (Worsaae's *Indus. Art*, p. 56).

Egypt—

Ceilings of tombs (Flinders Petrie's *Dec. Art*, figs. 52, 55, and 56).

ANALYSIS OF SPIRAL ORNAMENT, WITH THE LOCALITIES—*continued.*

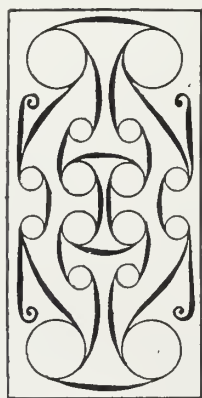
No. 1066.—A row of large double spirals in the centre, with a row of small triple spirals on each side connected by C and S curves.

Ireland—Drumcliff.

|

MSS.—Book of Kells.

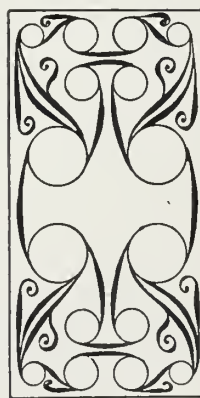
Rectangular Panels with Spirals arranged symmetrically on each side of an Axis in the Plane of the Paper.



No. 1067.—Four triple spirals in the centre, four other larger ones at the corners of the panel, and eight smaller double spirals arranged octagonally round the four centre ones, connected by C and S curves. The blank spaces are filled by single spirals not closely coiled.

Keills.

|

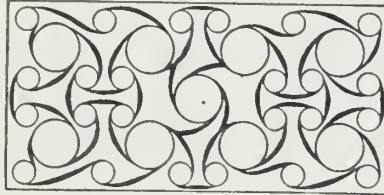


No. 1068.—Four large quadruple spirals in the centre, a group of four smaller triple spirals at the top and bottom, and four still smaller triple spirals in each corner of the panel. The single spirals filling the blank spaces are like those in No. 1067.

Ireland—
Kells.

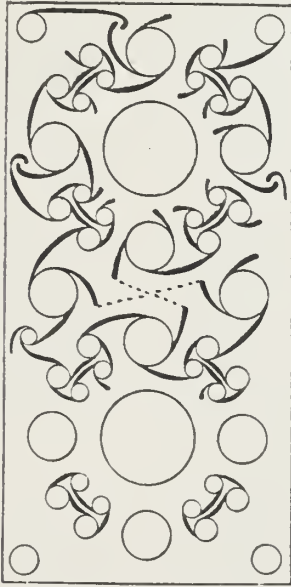
ANALYSIS OF SPIRAL ORNAMENT, WITH THE LOCALITIES—*continued.*

Rectangular Panels with Spirals arranged symmetrically round one or more Centres.



No. 1069.—A large quadruple spiral in the centre, with a group of four triple spirals to the right and left, each surrounding a set of four smaller double spirals, and sixteen more small double spirals round the margin of the panel, connected by C and S curves.

St Vigean's, No. 7.



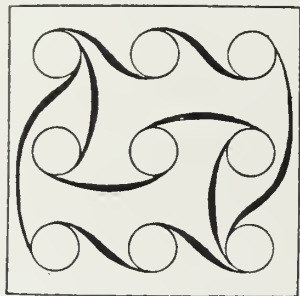
No. 1070.—This pattern cannot be completely made out owing to the sculpture having been damaged and the lower part of the panel broken off. The design is arranged round two large central bosses, which may or may not have been decorated with spirals. Above and below, and on each side of the central bosses, are placed four triple spirals, between each of which is a group of four triple spirals. There are two large triple spirals in each of the spandrels at the middle of the height of the panel. The spiral-work merges into interlaced-work and key-patterns forming a background to the raised bosses. When perfect, this must have been one of the most beautiful and elaborate specimens of the style in existence.

Nigg.



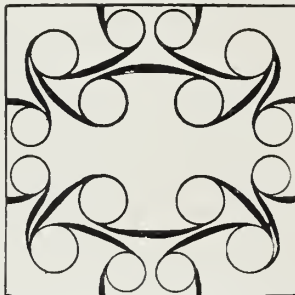
No. 1071.—This also has been mutilated, and therefore cannot be completely made out. The design, which is arranged round two centres, consists of two groups of six triple spirals surrounding another triple spiral in the middle. The spandrels are filled in with two sets of three triple spirals surrounding another triple spiral. There are also double and triple spirals at the four corners of the panel. This is almost as intricate as No. 1070, and the curves are more graceful and pleasing to the eye.

Nigg.

ANALYSIS OF SPIRAL ORNAMENT, WITH THE LOCALITIES—*continued.**Spiral Ornament filling Square Spaces (Nos. 1072 to 1085).*

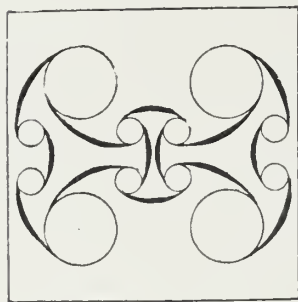
No. 1072.—Seven double spirals and two triple spirals arranged in three rows of three.

Cossins.



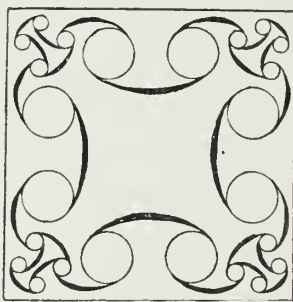
No. 1073.—A group of four double spirals in the centre surrounded by twelve others, eight double and four triple.

Clyne.



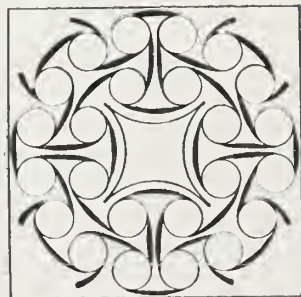
No. 1074.—A group of four small triple spirals in the centre, surrounded by four large and four small double spirals.

MSS.—Book of Kells (see No. 1030).



No. 1075.—Four large double spirals arranged round a centre and a group of four small triple and double spirals at each corner of the square.

MSS.—Book of Kells (see No. 1031).



No. 1076.—Triple spirals arranged in two rows, one of eight and the other of sixteen, round a centre, and all connected by C curves.

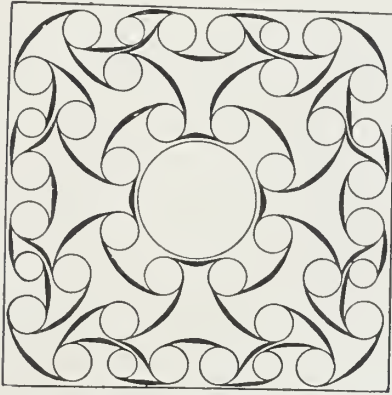
Glenferness.
Meigle, No. 4.



No. 1077.—The same as No. 1076, except that the whole design is turned through one right angle with regard to the margin.

Meigle, No. 9.

ANALYSIS OF SPIRAL ORNAMENT, WITH THE LOCALITIES—*continued.*



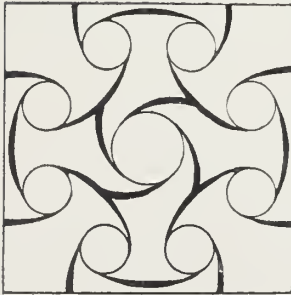
No. 1078.—Triple spirals arranged in two rows of one of eight and the other of sixteen round a centre, with a pair of triple spirals in each corner of the square and eight double spirals to fill in the spandils round the edge; all connected by C curves.

Hilton of Cadboll.



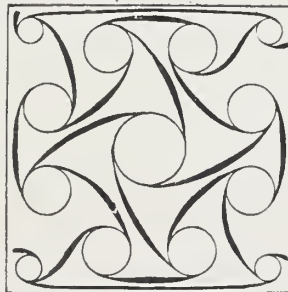
No. 1079.—A group of four triple spirals in the centre, surrounded by three rows, eight, sixteen, and sixteen triple spirals, with a pair of triple spirals in each corner of the square, and hooks to fill in the spandils; connected by C and S curves.

Shandwick.



No. 1080.—A quadruple spiral in the centre surrounded by eight triple spirals.

Skinnet.



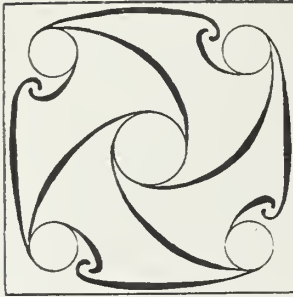
No. 1081.—A similar group of spirals to those in No. 1080, but with an additional small triple spiral in each corner of the square. The central spiral is larger than the others and is connected with four of the surrounding spirals by C curves arranged swastica-fashion.

St Madoes, No. 1.

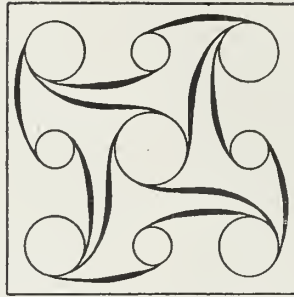


No. 1082.—A large quadruple spiral in the centre surrounded by four smaller triple spirals, one in each corner of the square. The central spiral is connected with those surrounding it by C curves arranged swastica-fashion, and the four outer spirals are connected with each other by S curves.

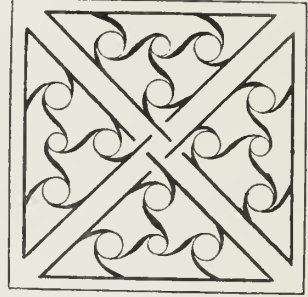
Meigle, No. 5.

ANALYSIS OF SPIRAL ORNAMENT, WITH THE LOCALITIES—*continued.*

No. 1083.—A similar group of spirals to those in No. 1082, but with the **S** curves replaced by hooks.



No. 1084.—A large quadruple spiral in the centre surrounded by four triple spirals, one in each corner of the square, and four smaller double spirals between them. The central spiral is connected with the ones in each corner of the square by **S** curves arranged swastica-fashion.



No. 1085.—Square divided by two diagonals into four triangles, each filled with a group of three triple spirals arranged round another triple spiral in the centre, and connected with it by **S** curves placed swastica-fashion.

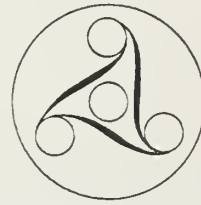
MSS.—
Lindisfarne Gospels,
Book of Armagh.

Golspie.

Meikle, No. 26.

Spiral Ornament filling Circular Spaces (Nos. 1086 to 1111).

No. 1086.—Three double spirals arranged round a centre, two of them being connected together by a double **S** curve, and the third enclosing the other two by an **S** curve which diverges and then returns upon itself by a **C** curve.



No. 1087.—Three double spirals arranged round a centre and connected by **S** curves.

Ireland—
Newgrange Chambered Tumulus (see
No. 1041c).

Inchbrayock, No. 1.
Monifieth, No. 1.
Meikle, No 6.

Scandinavia—
Bronze Axe-head (Worsaae's *Indus. Art*,
p. 64).

ANALYSIS OF SPIRAL ORNAMENT, WITH THE LOCALITIES—*continued*.



No. 1088.—A similar group of spirals to those in No. 1087, but triple and having curves diverging towards the margin.

Meigle, No. 3.



No. 1089.—The same as No. 1088, but with three additional small triple spirals and three hooks round the circumference of the circle.

MSS.—Book of Kells.



No. 1090.—Three triple spirals arranged round another triple spiral in the centre, connected with it by C curves, and with each other by S curves.

Dyce.



No. 1091.—Six triple spirals arranged round a six-fold spiral in the centre; connected with it and with each other by S curves. Compare with No. 1024D.

Shandwick.

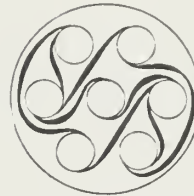
Aberlemno, No. 2.

„ No. 3.

Meigle, No. 1 (?).

Greece—

Inlaid Dagger-blade (Perrot and Chipiez, *Art in Primitive Greece*, vol. ii. p. 224).



No. 1092.—Group of four double spirals and two triple spirals arranged round a double spiral in the centre; all connected by S curves.

Egypt—

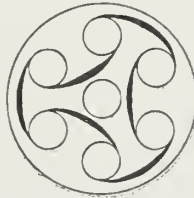
Scarab (Flinders Petrie's *Dec. Art*, fig. 39).



No. 1093.—Six double spirals arranged round a centre; three connected as in No. 1087, and the remaining three by S curves enclosing the others.

Scandinavia—

Bronze Axe-head, Denmark (Worsaae's *Inlus. Art*, p. 64).



No. 1094.—Six double spirals arranged round a centre and connected by C curves.

Metalwork—

Monymusk Reliquary.¹

Greece—

Stela from Acropolis at Mycenæ (Schliemann, p. 86).



No. 1095.—Three triple spirals and three hooks arranged round a centre and connected by C curves; forming the centre of a large spiral.

MSS.—

Book of Durrow.

¹ Three of the spirals are small and three large in this case.

ANALYSIS OF SPIRAL ORNAMENT, WITH THE LOCALITIES—*continued.*

No. 1096.—Three triple spirals and three hooks arranged round a triple spiral in the centre; the three spirals round the circumference being connected with the one in the centre by C curves placed swastica-fashion. This is much the most effective spiral pattern for filling a circle and occurs with greater frequency in Celtic art than any other.

The Maiden Stone.
St Vigean's, No. 6.
Kilnave.

Ireland—

Clonmacnois, Sepulchral Slabs of —tui
(A.D. 874), and of Suibine M'Mailæhumai
(A.D. 887) (see Petrie's *Christian Inscr.*,
vol. i. pls. 31 and 39).

Metalwork—

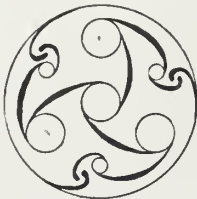
Lullingstone Bowl (see No. 1022D).
Circular enamelled Disc from Chesterton
(see No. 1022D).

MSS.—

Book of Durrow.
Book of Kells.



No. 1096A.—The same as No. 1096, but with three triquetra knots introduced amongst the spirals.
Dyce, No. 2.



No. 1097.—A similar design to No. 1096, but with three additional smaller double spirals round the circumference, adapted to form the centre of a large spiral.

MSS.—

Book of Kells.



No. 1098.—The same as No. 1097, but with the three small spirals round the circumference triple instead of double, and connected by C curves with the larger spirals adjoining.

MSS.—Book of Durrow
(see No. 1035).



No. 1099.—A similar design to No. 1098, but with S curves introduced.

MSS.—

St Gall Gospels.

ANALYSIS OF SPIRAL ORNAMENT, WITH THE LOCALITIES—*continued.*

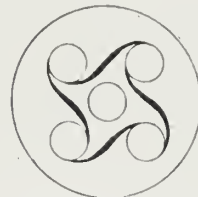


No. 1100.—Six large triple spirals arranged round another triple spiral in the centre and the spaces between them filled in with three small triple spirals, three small double spirals, and three hooks; all connected by C curves.

Metalwork—

Rosemarkie, No. 1.

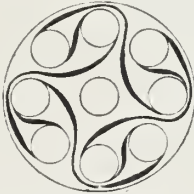
Circular enamelled Disc from the Crossthwaite Museum, now in the British Museum.



No. 1101.—Four double spirals arranged round a centre and connected by S curves.

Scandinavia—

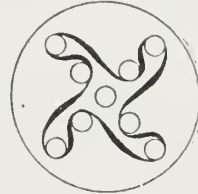
Sword-hilt, Denmark (Worsaae's *Indus. Art*, p. 55)



No. 1102.—This and No. 1103 are not capable of being converted into spiral patterns by filling in the circles with spirals, because the S curves approach the circumference of each circle in the same instead of in opposite directions. They belong to a distinct class of patterns, characteristic of Mycenaean metalwork, which seem to suggest the winding of a cord round a series of circular pegs. In this case the design has no doubt some affinity with the curved forms of the swastica.

Scandinavia—

Sword-hilt, Denmark (Worsaae's *Indus. Art*, p. 55).



No. 1103.—The same as No. 1102, but with every other one of the eight circles round the circumference brought nearer the centre and placed midway between the remaining four circles round the circumference and the central circle.

England—

Pre-historic Rock Sculpture at Ilkley, Yorkshire (*Jour. Brit. Archaeol. Assoc.*, vol. xxxv. p. 15).

Scandinavia—

Pre-historic Rock Sculpture at Tossene in Sweden (Alex. Holmberg's *Skandinavien's Hällristningar*, pl. 32, fig. 102).



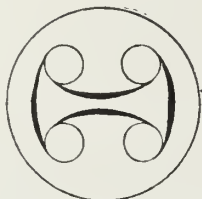
No. 1104.—Two large and two small double spirals and two hooks arranged round a centre; all connected by C curves forming the centre of a large spiral.

MSS.—Book of Kells.



No. 1105.—Eight double spirals of different sizes and two hooks arranged round a centre and connected by C curves.

MSS.—Book of Durrow.

ANALYSIS OF SPIRAL ORNAMENT, WITH THE LOCALITIES—*continued*.

No. 1106.—Four double spirals arranged round a centre and connected by C curves. It is possible that this pattern paved the way to the discovery of the method of completely covering a surface with spiral ornament (No. 1024A), set out on the square system. It was known more than 5000 years ago.

Ireland—

Clonmacnois, Sepulchral Slab of Maelbrigte (Petrie's *Christian Inscr.*, vol. i. pl. 58).

Egypt—

Scarab of Assa (B.C. 3589 to 3536) (see Flinders Petrie's *Dec. Art*, fig. 11, and *Hist. of Egypt*, p. 79).

Scandinavia—

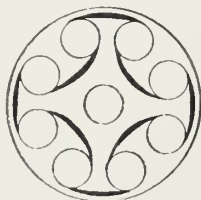
Bronze Axe-head,¹ Denmark (Worsaae's *Inlus. Art*, p. 64).



No. 1107.—Four quadruple and four triple spirals grouped round a centre with four smaller double spirals in the spandrels round the circumference; all connected by C curves.

Ireland—

Monasterboice.



No. 1108.—Eight double spirals grouped round a centre and connected by C curves.

Brodie.

Monymusk.

Fordoun.

Ireland—Tynan.

Monasterboice.

MSS.—Gospels of MacDurnan.

Metalwork—Circular enamelled Metal Disc from Chesterton (see No. 1022b).

Egypt—Scarab (Flinders Petrie's *Dec. Art*, fig. 34).



No. 1109.—Four large triple spirals and six small triple spirals grouped round a centre and connected by C and S curves.

Lethnott.

¹ In this case the pattern is not quite the same, because the curves *enclose* a pair of spirals instead of *connecting* them as in the case of the Newgrange spirals (No. 1086).

ANALYSIS OF SPIRAL ORNAMENT, WITH THE LOCALITIES—*continued*.



No. 1110.—A quadruple spiral in the centre surrounded by four triple spirals and four hooks. The C curves which connect the central spiral with those round it are placed swastica-fashion.



No. 1111.—The same as No. 1110, but with small triple spirals in place of the hooks and with curves diverging towards the margin.

Ireland—

Sepulchral Slab of St Berichtir at Tullylease, Co. Cork (A.D. 839) (see Petrie's *Christian Inscr.*, vol. ii. pl. 30).

MSS.—

Stockholm Gospels.

Egypt—

Scarab (Flinders Petrie's *Dec. Art*, fig. 43).

Ardchattan.

No. 1111A (no diagram).—One spiral alone filling a whole circle, generally the central boss of a cross.

St Vigean's, No. 15.
Roseneath.

Ireland—

Clonmaenois, Sepulchral Slabs of Colman (A.D. 924), Gillaciarain, Flamuchad (A.D. 1002), Bonuit, Muiredach (A.D. 966), Conn (A.D. 1059), Maelfinnia (A.D. 1056), Maelchiaran (A.D. 1079), Gillachrist (A.D. 1085), Maelmaire (A.D. 1106), Cainech and Maelmichil (Petrie's *Christian Inscr.*, vol. i. pls. 41, 54, 57, 61, 62, and 66).

Spiral Ornament filling Semicircular, Crescent-shaped, and Triangular Spaces.



No. 1112.—Four double spirals, two triple spirals, and two hooks, connected by C curves; arranged in a symmetrical group within a semicircle.

MSS.—

Gospels of MacRegol.

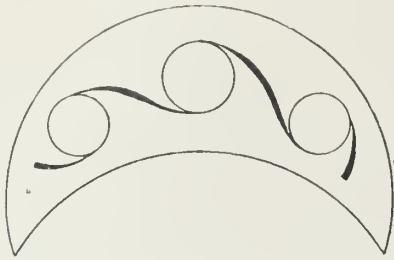


No. 1113.—Six triple spirals and twelve double spirals of gradually diminishing size, connected by C curves; arranged symmetrically within a crescent.

MSS.—

Book of Kells.

ANALYSIS OF SPIRAL ORNAMENT, WITH THE LOCALITIES—*continued.*



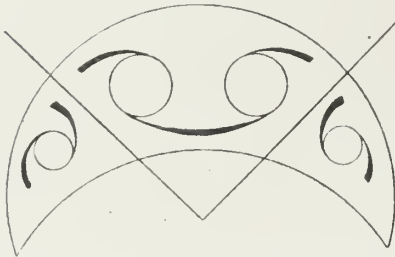
No. 1114.—Three double spirals connected by S curves, within a crescent.

Monifieth, No. 2.
Meigle, No. 6.



No. 1115.—Three triple spirals within a crescent; a single spiral at the right-hand corner or point of the horn and a double spiral at the left-hand corner; the spandrels filled in with six hooks (shown wrongly as small double spirals on the diagram); all connected by C curves.

St Vigean's, No. 1.



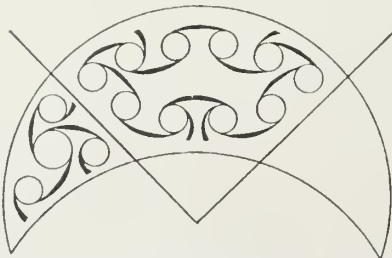
No. 1116.—Crescent divided into three panels by V-shaped rod; in the middle panel a pair of double spirals connected by C curves, and in each of the horns a double spiral.

Dyce.



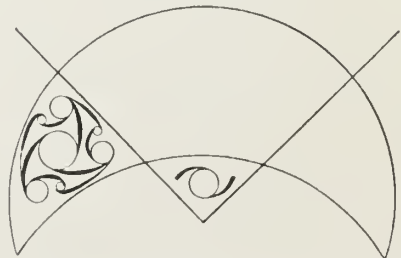
No. 1117.—The same as No. 1116, but with a quadruple spiral and a triple spiral on each side; connected by S curves in the middle panel.

St Madoes, No. 1.



No. 1118.—A crescent divided into three panels, the middle one containing a group of four triple spirals and six double spirals, connected by C curves, and the two horns containing a group of three double spirals arranged round a triple spiral in the centre, the C curves being arranged swastica-fashion.

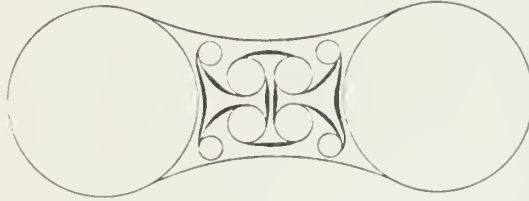
Elgin.



No. 1119.—A crescent and V-shaped rod forming four panels, the middle panel filled in with a key-pattern (No. 1022), the two horns containing each a group of spirals similar to those in a circle shown on No. 1096, but adapted to the triangular shape; and in the lower angle of the V-shaped rod a double spiral alone.

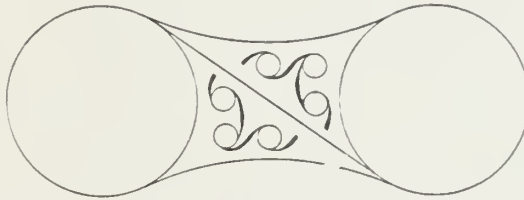
Hilton of Caddoll.

ANALYSIS OF SPIRAL ORNAMENT, WITH THE LOCALITIES—*continued*.



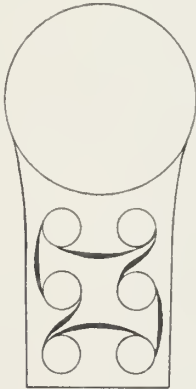
No. 1120.—A panel bounded by four circular arcs, forming the connecting bar between the two discs of the so-called "spectacle" symbol, filled in with a group of four large triple spirals, and four small double spirals connected by C curves.

Shandwick.



No. 1121.—A panel of similar form to that in No. 1120, but divided in half by the diagonal bar of the Z-shaped rod; each triangle filled in with a group of three double spirals connected by C and S curves.

Dyce, No 2.



No. 1122.—A four-sided panel, bounded by three straight lines and a circular arc, forming the lower part of symbol No. 122, filled in with six double spirals arranged in two rows and connected by C and S curves.

Dyce, No. 2.



No. 1123.—A group of four single spirals arranged swastica-fashion, and having the diverging bands interlacing in the centre.

Isl of Man—Kirk Onchan.

Scroll Foliage.

LIST OF LOCALITIES.

Scroll Foliage.

St Vigean's, No. 1.
 „ No. 2.
 Camuston.
 Dupplin.
 Crieff.
 St Andrews, No. 19.
 Mansfield.
 Kirkholm.
 Abercorn.
 Aberlady.
 Glencairn.
 Wamphray.
 Knockhill.

Scroll Foliage with Beasts, Birds, Dragons, &c., involved.

Hilton of Cadboll.
 Tarbet, No. 1.
 Mugdrum.
 Jedburgh, No. 2.
 Durrisdeer.
 Closeburn.
 Ruthwell.
 Knockhill.

Zoöomorphic Ornament.

LIST OF LOCALITIES.

Serpentine Creatures forming Interlaced- work.

Rosemarkie.
 Shandwick.
 Tarbet, No. 2.
 Nigg.
 Canna.
 Fordoun.
 Glamis Manse.
 Inchbrayock, No. 1.
 Kingoldrum, No. 1.
 St Vigean's, No. 1.
 „ No. 9.
 „ No. 18.
 Woodwray.
 Benvie.
 Kirriemuir, No. 3
 Meigle, No. 4.
 „ No. 11.
 „ No. 26.
 Carpow.
 Dogtown.

Serpentine Creatures forming Interlaced- work—continued.

Tullibole.
 Iona, No. 1.
 „ No. 3.
 „ No. 4.
 „ No. 9.
 „ No. 10.
 Soroby.
 Kildalton.
 Kilfinan.
 Kirkholm.
 Govan, No. 1.
 „ No. 4.

Beasts, Birds, and other Creatures with Bodies, Limbs, Crests, Tails, &c., forming Interlaced-work.

Rosemarkie, No. 1.
 Nigg.
 Canna.
 Brodie.

Beasts, Birds, &c.—continued.

Elgin.
 Aberlemno, No. 2.
 „ No. 3.
 Farnell.
 Kirriemuir.
 Woodwray.
 Benvie.
 Brechin, No. 2.
 Invergowrie, No. 1.
 St Vigean's, No. 13.
 Gask.
 St Madoes, No. 1.
 Meigle, No. 1.
 „ No. 2.
 „ No. 4.
 „ No. 9.

Beasts, Birds, &c.—continued.

Meigle, No. 11.
 „ No. 23.
 „ No. 26.
 Dupplin.
 Dunblane, No. 2.
 St Andrews, No. 1.
 Keills.
 Govan.
 Abercorn.
 Aberlady.
 Coldingham.
 Closeburn.
 Glencairn.
 Thornhill.
 Wamphray.

Figure Subjects.

ANALYSIS AND LIST OF LOCALITIES.

Scriptural Subjects.

OLD TESTAMENT.

Temptation of Adam and Eve.

Farnell (?).
 Iona, No. 2.

Sacrifice of Isaac.

Kildalton.

David and the Lion.

Nigg.
 Aberlemno, No. 3.
 Aldbar.
 Dupplin.
 St Andrews, No. 1.

David and Harp.

Nigg.
 Aldbar.

Jonah and the Whale.

Dunfallandy.
 Woodwray.
 Gask.

Daniel in the Den of Lions.

St Vigean's, No. 14.
 Meigle, No. 2.
 Dunkeld, No. 2.
 Iona, No. 1.
 „ No. 12.
 Kildalton.
 Keills.
 Inchinnan.
 Newton Woods.

NEW TESTAMENT.

Virgin and Child.

Brechin.

Virgin and Child—continued.

Iona, No. 1.
 „ No. 11.
 Kildalton.
 Crail.

Christ in Glory giving the Benediction.

Camuston.
 Knoekhill.

The Annunciation.

Ruthwell.

The Salutation.

Ruthwell.

The Flight into Egypt.

Ruthwell.

Miracle of Loaves and Fishes.

Dunkeld, No. 2.

Miracle of Healing the Blind.

Ruthwell.

Christ and Mary Magdalene.

Ruthwell.

The Raising of Lazarus.

St Andrews, No. 9.

The Crucifixion.

Camuston.
 Kingoldrum.
 Monifieth, No. 4.
 Strathmartine, No. 4.
 Abernethy, No. 4.
 Kirkholm.
 Lasswade.
 Ruthwell.

St Peter.

Brechin.

St John and the Agnus Dei.

Ruthwell.

Agnus Dei.

Knoekhill (?).

Symbols of the Four Evangelists.¹

Elgin.
 Inchbrayock.
 Brechin.
 Kirriemuir, No. 1.

Angels.

Shandwick.
 Eassie.
 Glamis Wood.
 Brechin.
 Dunfallandy.
 Meigle, No. 1.
 „ No. 2.
 Rossie.
 Iona, No. 1.
 „ No. 11.
 Kildalton.
 Kineardine.
 Aberlemno.
 Kirriemuir, No. 1
 „ No. 4.
 St Vigean's, No. 1.
 „ No. 11.
 Benvie.
 Camuston.
 Invergowrie.
 Strathmartine, No. 4.
 Keills.

*Ecclesiastical and Legendary Subjects.**St Paul and St Anthony.*

Ruthwell.

Saints with Nimbus.

Dunkeld, No. 2.

Saints with Nimbus—continued.

Brechin.
 Knoekhill.
 Hoddam.

¹ This is not, strictly speaking, a scriptural subject, but as the four evangelists are scriptural their symbols are given here.

Ecclesiastics with Books.

Aldbar.
 Camuston.
 Invergowrie.
 Kirriemuir, No. 1.
 St Vigean's, No. 11.
 „ No. 17.
 St Andrews, No. 4.
 Ardchattan.
 Keills.
 Hoddam.
 Nigg.

Ecclesiastics with Book-Satchels.

Papil.
 Bressay.

Ecclesiastics with Croziers.

Bressay.
 Papil.
 Brechin, No. 2.
 St Andrews, No. 9.
 St Vigean's, No. 4.
 Meigle, No. 29.

Ecclesiastics with Peaked Hoods.

Bressay.

Ecclesiastics with Peaked Hoods—continued.

Papil.
 Inchbrayock.
 Monifieth, No. 2.
 Ardchattan.
 St Vigean's, No. 7.
 „ No. 11.
 Dunfallandy.
 Ardchattan.
 Eilan Mòr.

Ecclesiastics Enthroned.

Kingoldrum, No. 1.
 „ No. 2.
 St Vigean's, No. 7.
 „ No. 10.
 „ No. 11.
 „ No. 17.

Aldbar.
 Dunfallandy.
 Govan.

*Ecclesiastics with Hem of Vestment
 Ornamented.*

Rosemarkie, No. 4.
 Meigle, No. 24.
 „ No. 29.

Secular Subjects.

Hunting Scenes.

Hilton of Cadboll.
 Shandwick.
 Nigg.
 Elgin.
 Burghead, No. 7.
 Aberlemno, No. 3.
 Eassie.
 Inchbrayock, No. 1.
 „ No. 3.
 Kirriemuir, No. 1.
 Monifieth, No. 3.
 St Vigean's, No. 1.
 „ No. 8.
 Meigle, No. 1.

Hunting Scenes—continued.

Meigle, No. 2.
 „ No. 11.
 „ No. 16.
 „ No. 26.
 Rossie.
 Forteviot, No. 4.
 Largo.
 Scoonie.
 St Andrews, No. 1.
 Mugdrum.
 Sauchope.
 Tullibole.
 Dogtown.
 Inverkeithing.

Hunting Scenes—continued.

Barrochan.
 Eilan Mòr.
 Mountblow House.
 Jordan Hill.
 Stanlie.
 Newton Woods.
 Govan, No. 1.
 „ No. 4.
 „ No. 5.

Horsemen, in most cases armed with Spear, Shield, and Sword.

Bressay.
 Edderton.
 Tarbet, No. 1.
 Kincardine.
 Canna.
 Burghead, No. 8.
 Drainie, No. 13.
 Forres.
 Mortlach.
 Migvie.
 Fordoun.
 Cossins.
 Balluderon.
 Inchbrayock.
 Woodwray.
 Aldbar.
 Benvie.
 Invergowrie, No. 2.
 Kirriemuir, No. 3.
 Menmuir, No. 1.
 „ No. 2.
 St Vigean's, No. 18.
 „ No. 21.
 „ No. 22.
 Dunfallandy.
 Fowlis Wester.
 Gask.
 Logierait.
 St Madoes, No. 1.
 Meigle, No. 3.
 „ No. 4.
 „ No. 5.
 „ No. 6.

Horsemen, &c.—continued.

Dupplin.
 Dull.
 Dunblane, No. 1.
 Dunkeld, No. 1.
 „ No. 2.
 Aberlemno.
 Barrochan.
 Mugdrum.
 Dogtown.
 Sauchope
 Crail.
 Largo.
 Jordan Hill.
 Mountblow House.
 Inverkeithing.
 Govan, No. 2.

Men on Foot armed with Spear and Shield.

Shandwick.
 Nigg.
 Drainie, No. 8.
 Eassie.
 Dupplin.
 Dull.
 Dunkeld.
 St Andrews, No. 1.
 Ardochattan.

Archers.

Ruthwell.
 Forres.

Archer with peaked Hood and Cross-bow.

Shandwick.
 Glenferness.
 St Vigean's, No. 1.
 Meigle, No. 10.

Man with Cymbals.

Nigg.

Men with Axes.

Glamis Manse.
 Golspie.
 Barrochan.

- Man playing on Pipes.*
Ardehattan.
- Men with Harps.*
Monifieth, No. 4.
Iona, No. 1.
Ardehattan.
Dupplin.
Iona, No. 1.
- Men with Drinking Horns, Hunting Horns,
or War Trumpets.*
Monifieth, No. 4.
Barroehan.
Hilton of Cadboll.
Aberlemno, No. 3.
Shandwick.
- Men with Clubs.*
Inchbrayock, No. 1.
Menmuir, No. 1.
- Men wearing Shoes.*
St Vigean's, No. 7.
Meigle, No. 3.
,, No. 5.
,, No. 16.
,, No. 24.
Forteviot, No. 2.
- Man holding Water-Ewer with Spout.*
Canna.
- Man and Cauldron.*
Ulster.
Glamis Manse.
- Men in Boat.*
Cossins.
- Men in Chariot.*
Meigle, No. 10.
- Man riding on Beast.*
Shandwick.
- Man pursued, attacked, or devoured by Beast.*
Meigle, No. 10.
,, No. 11.
,, No. 26.
Fowlis Wester.
Rothsay, No. 1.
Murthly.
Rosemarkie, No. 3.
- Man attacking Beast.*
Golspie.
St Andrews, No. 1.
Aldbar.
Abercromby, No. 4.
Drainie.
- Man attacked by Bird.*
Aberlemno, No. 1.
- Man holding two Birds by their Necks.¹*
Rossie.
- Man interlaced with Bird, which is seizing
him by the Neck.*
Meigle, No. 9.
Monifieth, No. 3.
- Four Men placed Swastica-wise and Inter-
laced.²*
Meigle, No. 26.
- Two Men Wrestling or Embracing.*
Glenferness.
Tullibole.
Eilan Mòr.

¹ This subject seems to have had its origin in Egypt; thence it got into Mycenaean art (see account of treasure from Ægina in *Journ. Hell. Stud.*, vol. xiii. p. 201), and then into Greek art (see plate in British Museum from tomb of Camirus, Rhodes; also compare with initial of word "Tunc" in Book of Kells, illustrated in *Facsimiles of National Manuscripts of Ireland*, where there is only one bird; and with one of the panels of the Franks casket in the British Museum).

² Similar designs occur in Book of Kells, and on the Lismore crozier (O'Neill's *Fine Arts of Ancient Ireland*, p. 42).

Two Men Fighting.

Shandwick.

Man between two or more Beasts.

Kettins.

The Maiden Stone.

Hamilton.

Keills.

Iona, No. 1.

Inchinnan.

Man swallowed or disgorged by Monster, probably intended for Jonah and the Whale.

Dunfallandy.

Woodwray.

Gask.

Man with Cow.

St Vigean's, No. 7.

Fowlis Wester.

Man placed Head downwards.

St Vigean's, No. 7.

,, No. 14.

Men (Miscellaneous, occurring singly, or figure subjects).

Rhyrie, No. 3.

Kirriemuir, No. 2.

Canna.

Kirkholm.

Drainie, No. 13.

Eassie.

Men (Miscellaneous, occurring singly, or figure subjects)—continued.

Strathmartine, No. 4.

Meigle, No. 7.

,, No. 27.

Barrochan.

Minnigaff.

Dunkeld, No. 2.

Forteviot, No. 1.

Woman.¹

Inchbrayock, No. 1.

Battle Scenes.

Forres.

Dupplin.

Aberlemno, No. 1.

Pair of Men or Ecclesiastics with Circular Disc between them.

Kirriemuir, No. 1.

St Vigean's, No. 7.

Man with Beast's Head.

Inchbrayock, No. 1.

Glamis Wood.

Kettins.

Rossie.

Man and Sea Horse.

Meigle, No. 4.

Man hanging on to Horse's Neck.

St Vigean's, No. 25.

*Beasts, Birds, Fishes, Reptiles, Trees, Monsters, and Fabulous Creatures.**Bull or Cow.*

Ulster.

Shandwick.

Cossins.

Eassie.

Woodwray.

St Vigean's, No. 7.

Fowlis Wester.

Meigle, No. 12.

Inverness, No. 1.

Bull or Cow—continued.

Inverness, No. 2.

Burghead, No. 1.

,, No. 2.

,, No. 3.

,, No. 4.

,, No. 5.

,, No. 6.

Mortlach.

¹ A figure riding on a horse with a side saddle occurs on the upright cross-slab at Hilton of Cadboll which may perhaps be meant for a woman.

Horse.

Inverury.
 Skinnet.
 Drainie, No. 3.
 Eassie.
 Abernethy, No. 2.
 (See also *Horsemen.*)

Sheep.

Shandwick.
 Nigg.
 Aldbar.
 St Andrews, No. 1.

Dog or Hound.

Dull.
 (See also *Hunting Scenes.*)

Boar.

Dores.
 Knocknagael.
 Abercromby, No. 4.

Stag.

Grantown.
 Carpow.
 Eilan Mòr.
 (See also *Hunting Scenes.*)

*Quadrupeds whose species are not capable of
 certain identification.*

Bressay.
 Pupil.
 Ulbster.
 Shandwick.
 Tarbet, No. 1.
 Nigg.
 Canna.
 Glenferness.
 Mortlach.
 The Maiden Stone.
 Fordoun.
 Cossins.
 Eassie.
 Glamis Manse.
 „ Wood.

Quadrupeds, &c.—continued.

Kettins.
 Inchbrayock, No. 1.
 „ No. 3.
 Monifieth, No. 3.
 „ No. 4.
 Strathmartine, No. 1.
 „ No. 3.
 St Vigean's, No. 1.
 „ No. 14.
 „ No. 19.
 „ No. 20.
 „ No. 24.
 Meikle, No. 1.
 „ No. 2.
 „ No. 4.
 „ No. 5.
 „ No. 7.
 „ No. 10.
 „ No. 11.
 „ No. 12.
 „ No. 13.
 „ No. 15.
 „ No. 17.
 „ No. 22.
 „ No. 23.
 „ No. 26.
 St Madoes, No. 1.
 Woodwray.
 Aldbar.
 Benvie.
 Brechin.
 Kingoldrum, No. 2.
 Kirriemuir, No. 3.
 Menmuir.
 Dunfallandy.
 Fowlis Wester.
 Gask.
 Dunblane, No. 1.
 Dunkeld, No. 2.
 „ No. 3.
 Forteviot, No. 1.
 Abercromby, No. 4.
 St Andrews, No. 1
 Crail.
 Inverkeithing.

Quadrupeds, &c.—continued.

Sauchope.
 Arthurlee.
 Barrochan.
 Iona, No. 1.
 „ No. 4.
 „ No. 9.
 Kildalton.
 Ardchattan.
 Eilan Mòr.
 Keills.
 Mountblow House.
 Inchinnan, No. 3.
 Stanlie.
 Newton Woods.
 Hamilton.
 Govan, No. 1.
 Borthwick.
 Lasswade.
 Jedburgh, No. 2.
 Closeburn.
 Murthly.
 Rossie.
 Dupplin.

*Pair of Beasts with Human Head between
 them, facing each other at Apex of
 Upright Cross-Slab.*

Cossins.
 Monifieth.
 Dunfallandy.

*Pair of Beasts facing each other at Apex of
 Upright Cross-Slab.*

Aberlemno, No. 2.
 Farnell.
 Monifieth, No. 2.
 Dunfallandy.
 Meigle, No. 4.
 „ No. 5.
 „ No. 26.
 Dunblane, No. 1.
 Cossins.

Beasts' Heads used as Terminals.

Meigle, No. 26.

Birds.

Farr.
 Shandwick.
 Nigg.
 Elgin.
 Aberlemno, No. 2.
 Kettins.
 Monifieth, No. 3.
 St Vigean's, No. 1.
 „ No. 7.
 „ No. 10.
 Brechin, No. 1.
 Fowlis Wester.
 Rossie.
 Dupplin.
 Meigle, No. 3.
 „ No. 5.
 „ No. 9.
 Dupplin.
 St Andrews, No. 1.
 Crail.
 Kilfinan.
 Kirkholm.
 Minnigaff.
 Aberlady.
 Jedburgh.
 Durrisdeer.
 Closeburn.

Fishes.

St Vigean's, No. 1.
 Iona, No. 9.
 Rothesay.
 Hamilton.

Reptiles (Serpents and Lizards).

Ulster.
 Farnell.
 Kinell.
 Strathmartine, No. 2.
 St Vigean's, No. 1.
 Meigle, No. 4.
 „ No. 5.
 „ No. 11.
 „ No. 30.
 St Andrews, No. 1.

Reptiles (Serpents and Lizards) — continued.

Inchbrayock.
 Monifieth, No. 2.
 „ No. 4.
 Murthly.

Trees.

Eassie.
 Inchbrayock.
 Nigg.
 St Andrews, No. 1.
 Iona, No. 2.

Monsters and Fabulous Creatures.

Man with Beast's Head.

Glamis Wood.
 Inchbrayock, No. 1.
 Murthly.
 Meigle, No. 11.
 St Andrews, No. 1.
 Rothesay.

Beast with Man's Head.

Meigle, No. 26.
 St Andrews, No. 1.

Winged Beast or Griffin.

Kettins.
 St Vigean's, No. 1.
 Meigle,¹ No. 4.
 „ No. 9.
 „ No. 26.
 St Andrews, No. 1.
 Jedburgh, No. 2.

Bird-Monsters.

Papil.
 St Vigean's, No. 1.
 Murthly.
 Meigle, No. 26.
 Rossie.

Centaur.

Aberlemno, No. 3.
 Glamis Manse.
 Camuston.
 Meigle, No. 2.

Sea-Monsters, Fish-Monsters, and Mermaids.

Skinnet.
 Brodie.

Sea-Monsters, &c.—continued.

Mortlach.
 The Maiden Stone.
 Forres.
 Cossins.
 Kettins.
 Monifieth, No. 3.
 Meigle, No. 1.
 „ No. 11.
 „ No. 22.
 Strathmartine, No. 1.
 Woodwray.
 Carpow.
 Bressay.
 Dunfallandy.
 Iona, No. 9.
 Menmuir, No. 1.

Sea Horse.

Aberlemno, No. 2.
 Meigle, No. 1.
 „ No. 4.
 „ No. 26.
 Murthly.
 Largo.

Dragon.

Brechin.

Tail of Beast terminating in Serpent's Head.¹

Meigle, No. 1.
 „ No. 4.
 Rossie.
 Forteviot, No. 1.

¹ As on Norman font in Lincoln Cathedral. An example which may be compared with the one at Meigle occurs in an initial letter from a Lombardic (?) MS. illustrated in the *Nouveau Traité de Diplomatique*, vol. ii, pl. 19. Jonah and the Whale may also be seen in the same plate and a monk in a pointed hood like those on the Scotch stones.

Inscriptions occurring on the Monuments, classified according to the Style of the Lettering, with Localities.

Debased Latin Capitals.

Greenloaning,¹ Perthshire.
 Kirkliston, Edinburghshire.
 Yarrowkirk, Selkirkshire.
 Kirkmadrine, Wigtownshire.
 Whithorn, ,, No. 1.
 ,, ,, No. 2.

Debased Latin Capitals and Ogam.

Newton, Aberdeenshire.

Ogams only.

Bressay, Shetland.
 Cunningsburgh, ,,
 Lunnasting, ,,
 St Ninian's, ,,
 Broch of Burrian, Orkney.
 Golspie, Sutherland.
 Brodie, Nairn.
 Aboyne, Aberdeenshire.
 Logie Elphinstone, Aberdeenshire.
 Auquhollie, Kincardineshire.
 Seoonie, Fifeshire.
 Abernethy, Perthshire.
 Gigha, Argyleshire.

Anglo-Saxon Capitals.

Lethmott, Forfarshire.
 Ruthwell, Dumfriesshire.
 Tarbat, No. 10, Ross shire.

Hiberno-Saxon Minuscules.

St Vigean's, Forfarshire.
 Fordoun, Kincardineshire.
 Papa Stronsay, Orkney.
 Iona, Argyllshire.

Anglian Runes.

Ruthwell, Dumfriesshire.
 St Ninian's Cave, Whithorn.
 Whithorn, No. 4.

Scandinavian Runes.

Kilbar, I. of Barra.
 Crosskirk, Shetland.
 Cunningsburgh, ,,
 Inchmarnoek, Bute.
 King's Cove, Arran.
 Maeshowe, Orkney.

¹ This inscription is a doubtful one. See the paper of Professor Rhys in the *Proceedings of the Society of Antiquaries of Scotland*, vol. xxxii. p. 330.

LIST OF BOOKS OF REFERENCE
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Dr J. Anderson's "Scotland in Early Christian Times" (2nd series).
Capt. T. P. White, "Archæological Sketches in Kintyre and Knapdale."
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ENGLAND.¹

- General.*—Prof. G. Stephen's "Handbook of the Old Northern Runic Monuments."
Gibson's edition of Camden's "Britannia."
Lyson's "Magna Britannia."
Bedfordshire.—"Assoc. Architec. Soc. Rep.," vol. 9, p. 265.
Cambridgeshire.—"Archæologia," vol. 27, p. 288; and "Archæological Journal," vol. 12, p. 201.
Cheshire.—J. P. Etwaker's "East Cheshire"; S. Lyson's "Magna Britannia," vol. 2; H. Ecroyd Smith's "Churches of West Kirkby"; J. R. Allen and E. W. Cox in "Trans. Hist. Soc. Lanc. and Cheshire," N.S., vol. 9.
Cornwall.—J. T. Blight's "Crosses of Cornwall"; A. G. Langdon's "Old Cornish Crosses" (complete bibliography given on p. 29); A. G. Langdon in "Jour. R. Inst. Cornwall," vol. 10, p. 33, and "Jour. Brit. Archæol. Assoc.," vol. 44, p. 301; vol. 45, p. 318; vol. 47, p. 274; and vol. 49, p. 274; Borlase's "Antiquities of Cornwall"; S. Lyson's "Magna Britannia," vol. 3.
Cumberland and Westmoreland.—Stuart's "Sculptured Stones of Scotland," vol. 2;

¹ There is at present no work which deals with the monuments of this period as a whole. A list of those known up to 1835 will be found in the "Journal of the British Archæological Association," vol. xli.

S. Lyson's "Magna Britannia," vol. 4; Canon E. H. Knowles in "Trans. Cumb. and West. Ant. Soc.," vol. 2, p. 27; vol. 3, p. 96; and vol. 4, p. 139; Rev. J. F. Hodgson in ditto, vol. 4, p. 178; Rev. W. S. Calverley in ditto, vol. 5, p. 149; vol. 6, pp. 211, 359, and 273; vol. 7, p. 289; vol. 9, pp. 1, 458, 461, and 472; vol. 11, pp. 120 and 230; vol. 12, pp. 171, 243, and 458; vol. 13, p. 118; and "Archæol. Jour.," vol. 40, p. 143.

Derbyshire.—Rev. Dr C. J. Cox's "Chunehes of Derbyshire"; S. Lyson's "Magna Britannia," vol. 4; Bateman's "Vestiges of the Antiquities of Derbyshire"; Rt. Rev. G. F. Browne in "Jour. Derbyshire Ant. Soc."

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Wiltshire.—J. R. Allen in "Wilts. Archæol. Mag.," vol. 27, p. 50.

Yorkshire.—Whitaker's "Richmondshire," vol. 2, p. 195; Prof. G. Stephens in "Yorksh. Archæol. Jour.," vol. 8, p. 49; J. R. Allen in "Jour. Brit. Archæol. Assoc.," vol. 40, p. 158; vol. 46, p. 288; and vol. 47, pp. 156 and 225; Rt. Rev. G. F. Browne in ditto, vol. 41, p. 31; "Assoc. Architec. Soc. Rep.," vol. 10, pp. 61 and 239; "Archæologia," vol. 34, p. 437; "Proc. Soc. Ant. Lond.," 2nd ser., vol. 4, p. 33.

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¹ There is a piece of bone with the figure-of-eight knot upon it in the York Museum.



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