ARCHAEOLOGIA

OR

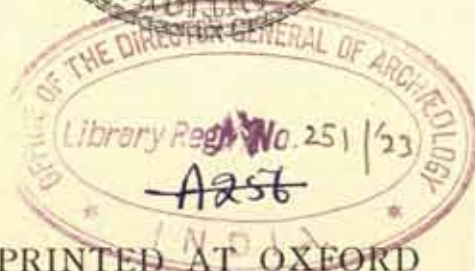# MISCELLANEOUS TRACTS

RELATING TO

ANTIQUITY

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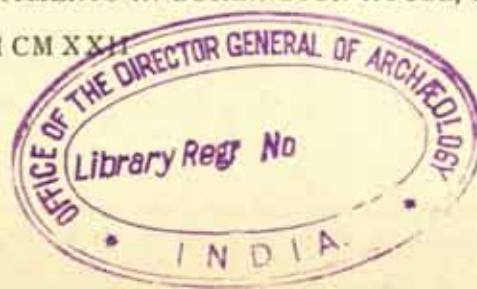AND SOLD AT THE SOCIETY'S APARTMENTS IN BURLINGTON HOUSE, LONDON

M CM XXII

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SOCIETY OF ANTIQUARIES OF LONDON

SECOND SERIES: VOLUME XXII

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I.—*Medieval Seals of the Bishops of Durham.* By C. H. HUNTER BLAIR, *Esq., M.A., F.S.A.*

Read 14th November 1921.

AT the dissolution of the Benedictine house of Durham its last prior, Hugh Whitehead, became the first dean of the cathedral church, and its large estates passed almost undiminished to the new dean and chapter, who thus also succeeded to its title-deeds and muniments. These remained in their old home in the treasury of the monks, and afterwards in the cathedral library, until, by the exertions of our late Fellow the Rev. Dr. Greenwell, they were provided with a new resting-place in the rebuilt and refitted chapel of St. Helen, above the great gateway of the monastery. When arranging these documents in their new home Dr. Greenwell made a slip catalogue of the seals attached. This catalogue, collated, annotated, and illustrated by the present writer, has been printed by the Society of Antiquaries of Newcastle-upon-Tyne.[1] In it is a long series of the seals of the bishops of Durham from Ranulf Flambard (A.D. 1099–1128) to Cuthbert Tunstall (A.D. 1530–1559).[2]

These seals are valuable both from the historic and artistic standpoint, for they are contemporary monuments, albeit rather small, of known and certain date produced by the best artists of their day. On his seal of dignity each bishop is shown as he appeared in his most solemn moments and in a manner approved of by himself. They are therefore very useful for the study of ecclesiastical vestments. The many saints they depict are in their proper dress, holding their appropriate emblems, and upon them can be traced the gradually increasing importance of Saint worship and intercession during the thirteenth and fourteenth centuries.

The armorial types afford the best means for a study of the art of the medieval heralds. From about the end of the thirteenth century shields of arms and their accessories are freely used, thus bringing to us first-hand knowledge

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[1] *Archaeologia Aeliana*, 3rd ser., vols. vii–xvii.

[2] For the dates of each bishop I have used 'The Table of Pontifical Years of the Bishops of Durham', by Wm. Page, F.S.A. (*Trans. Northumb. and Durham Architectural and Archaeological Society*, vol. iv, p. 19).

of the varying shapes of shields, of the charges upon them, and the different methods of blazoning armorial achievements. For this their personal aspect and known date make them most valuable. Upon them also can be followed, with certainty of date, the growth of the engraver's art. We can see the crude archaic figures of the early twelfth century gradually giving place to the firmly drawn, finely moulded figures of the thirteenth, depending for their beauty on strength of line rather than on ornament. We see these replaced by the beautiful seals of mid-fourteenth century date, with saints standing in crocketed and canopied niches surrounded by rich tracery of fine tabernacle work, as though the artist was striving to reproduce in miniature the reredos of the high altar of the bishop's church. These are unsurpassed for beauty of design and delicacy of detail. The tendency of later years was to overload the seal with ornament, to pay too great attention to details of costume, and so the art gradually decays, to rise up for a little under the classical influence of the Renaissance; but with the Reformation the art of seal engraving passes, and seals henceforth interest us no more.

Before considering in detail the motives of the various types of seals used by the bishops of Durham, a little should be said about the shape, material, and methods of attachment of, at least, the earlier of them. These, till about the end of the twelfth century, are a slightly elongated oval which gradually assumes a narrower more pointed form until by mid-fourteenth century they attain the graceful shape best illustrated by the seals of Bury, Hatfield, Fordham, and Skirlaw (pl. II). They revert once more to the oval shape towards the end of the sixteenth century. It is perhaps needless now to say that this shape had no symbolic significance; it was used because the artist found it the most suitable to contain the standing figure, just as the seals of ladies, for the same reason, are of similar shape. Their thickness varies greatly: some of the earlier ones are masses of wax, convex at the back, as though permanence was to be attained by bulk; others of early date are 'dished'—that is, the die was cut convex on the face so as to leave a cup-shaped impression, the edge of which stood above and protected the central device (pl. I, 1, 2, 5).[1] The legend was cut upon this sloping edge, but the style did not persist after about the middle of the twelfth century. The use of a counterseal did away with the spherical backs, and with harder, better mixed wax the seals become thinner until some of the hard red wax examples of the mid-fourteenth century are barely 1 mm. in substance. In the later fifteenth century, with poorer wax, the tendency was to revert to a greater thickness.

The material of all episcopal seals at Durham is beeswax, at first almost pure, but afterwards mixed with a resin, probably colophony; some of the early seals have a paste-like appearance probably caused by the mixture of chalk

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[1] See Catalogue, *op. cit.*, nos. 3110, 3113.

with the wax, making them flaky and easily broken; these early seals are of a natural colour, often covered with a brown varnish for protection. Puiset (A.D. 1153–1195) is the first to use green wax; Richard Marsh (A.D. 1217–1226) introduces red, and his immediate successors use brown, green, and red apparently indiscriminately, though green predominates. From the late thirteenth to the middle of the fifteenth century red of a fine hard nature is more general, but after that date this hard red wax is no longer used and a soft, brown, friable wax, such as had long been used for the Chancery seals, takes its place. Privy seals and signets are round and invariably of red wax, whilst the great seals in Chancery are a varying shade of brown, occasionally dark green and once only red (Hatfield).

The seals of the early bishops Flambard (A.D. 1099–1128) and Rufus (A.D. 1133–1140) are attached to the document by a strip partly cut from its lower edge which passes transversely through the wax—that is, by way of the shorter axis of the seal. Sainte-Barbe (A.D. 1143–1152) suspends one of his vertically by a double strip of parchment passed through an incision in the charter and the loose ends fastened together by the seal; after his date this becomes the usual method of attachment. Poitou (A.D. 1197–1208) attaches some of his to more important charters by silken ribbons, an example followed by his successors. Privy seals and signets are attached, generally, by a single strip partially cut off the deed, though they, especially the latter, are occasionally affixed to the face of the document. The great seals in Chancery are attached sometimes by a double strip of parchment, but more usually by finely woven cords of silk or by silken ribbons. Blue, red, and yellow are the general colours, though there are examples of green, but two different colours are never used for one seal.

The matrix was probably of silver; it certainly was so for the later bishops. Of the engravers or the cost of the seals no record survives.[1] We know, for it is recorded in their 'Inventories',[2] that on the day of the burial of each bishop his seals were broken and offered at St. Cuthbert's shrine. After the four seals of Richard of Bury had been broken and so offered the feretrar (Richard of Wolviston) made from them a silver-gilt chalice for the altar of St. John Baptist, on which was inscribed:

Hic calix insignis fit praesulis ex tetra signis
Ri. Dunelmensis quarti, natu Beriensis.[3]

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[1] The cost of those of three of the priors of Durham is noted in the rolls of the bursar of the convent. The two seals of Prior John Fossor (A.D. 1341–1374) cost 13s. 8d. (Surtees Soc. Publ. c, p. 538). Those of Prior William Ebchester (A.D. 1446–1456) cost 26s. 8d. (ibid., vol. ciii, p. 631). Joss' the goldsmith received 21s. 8d. for making those of Prior John Burnaby (A.D. 1456–1464) (ibid., p. 634).

[2] Wills and Inventories (Surtees Soc. Publ., vol. ii).

[3] Historiae Dunelmensis Scriptores Tres, p. ccclxxxviii (Surtees Soc. Publ, vol. ix).

Those of Thomas of Hatfield were likewise melted and made into a silver-gilt image of the bishop, which was hung at the head of St. Cuthbert's shrine, and inscribed :

Jon Alvervilla monachus capiendo sigilla .
Ex Hatfeld Thomae sic providit, bene pro me.[1]

The earliest and most important of the different types used by the bishops of Durham was the episcopal seal proper, now usually called the seal of dignity. This was appended to important charters relating to the bishop's property or rights, and to authenticate copies of documents. There are no examples of pre-Conquest date at Durham, nor are there any of bishops Walcher or St. Calais, though two forged seals of the latter, probably of late twelfth-century date, attached to spurious charters, purport to be his (pl. I, 1).[2] He certainly used seals, for their destruction, after his death, is recorded in his 'Inventory',[3] but no impressions now remain. The series therefore begins with Ranulf Flambard (A. D. 1099–1128) and ends after the dissolution with Cuthbert Tunstall (A. D. 1530–1559), though towards the end there are one or two gaps. The sole motive of this type in the twelfth century is a figure of the bishop, standing, facing, vested in full pontificals. For the first century, from Flambard to Puiset (A.D. 1099–1195), the background of this figure is quite plain (pl. I, 2–6). The artists of the thirteenth century soon realized that the blank spaces on either side of the figure should be filled, so Philip of Poitou (A.D. 1197–1208) stands on a rudimentary bracket, enclosed in a framework of the gracefully curved branches of the broom plant (pl. I, 7); his successor, Richard Marsh (A.D. 1217–1226), is shown on his rather stiff and conventional first seal standing in a marsh in which plants are growing (pl. I, 8). His second seal (pl. I, 9) is a very charming example of the beauty of proportion and form of early thirteenth-century art; with it we leave behind the archaic stiffness and conventionality of the earlier seals and are led into a more natural world. It represents a new art full of life and vigour, deriving little adventitious help from mere ornament. Richard Poore (A.D. 1228–1237) covers the whole field of his seal with a diaper of fine double lines forming lozenges with cinquefoils at the intersections and enclosing alternately a crescent and a star, a rich background showing up in strong relief his finely moulded figure and gracefully draped vestments (pl. I, 10). Nicholas Farnham (A. D. 1241–1249) adds further to the decorative accessories of his figure (pl. I, 11). He stands on a carved bracket beneath a canopy in the form of a church. On

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[1] *Historiae Dunelmensis Scriptores Tres*, p. ccclxxxviii (Surtees Soc. Publ., vol. ix).

[2] *Feodarium Prioratus Dunelmensis*, p. xxxvii et seq. (Surtees Soc. Publ., vol. lviii).

[3] 'Audita morte istius, statim fracta fuerunt eius sigilla et sancto Cuthberto oblata'; *Wills and Inventories*, p. 1.
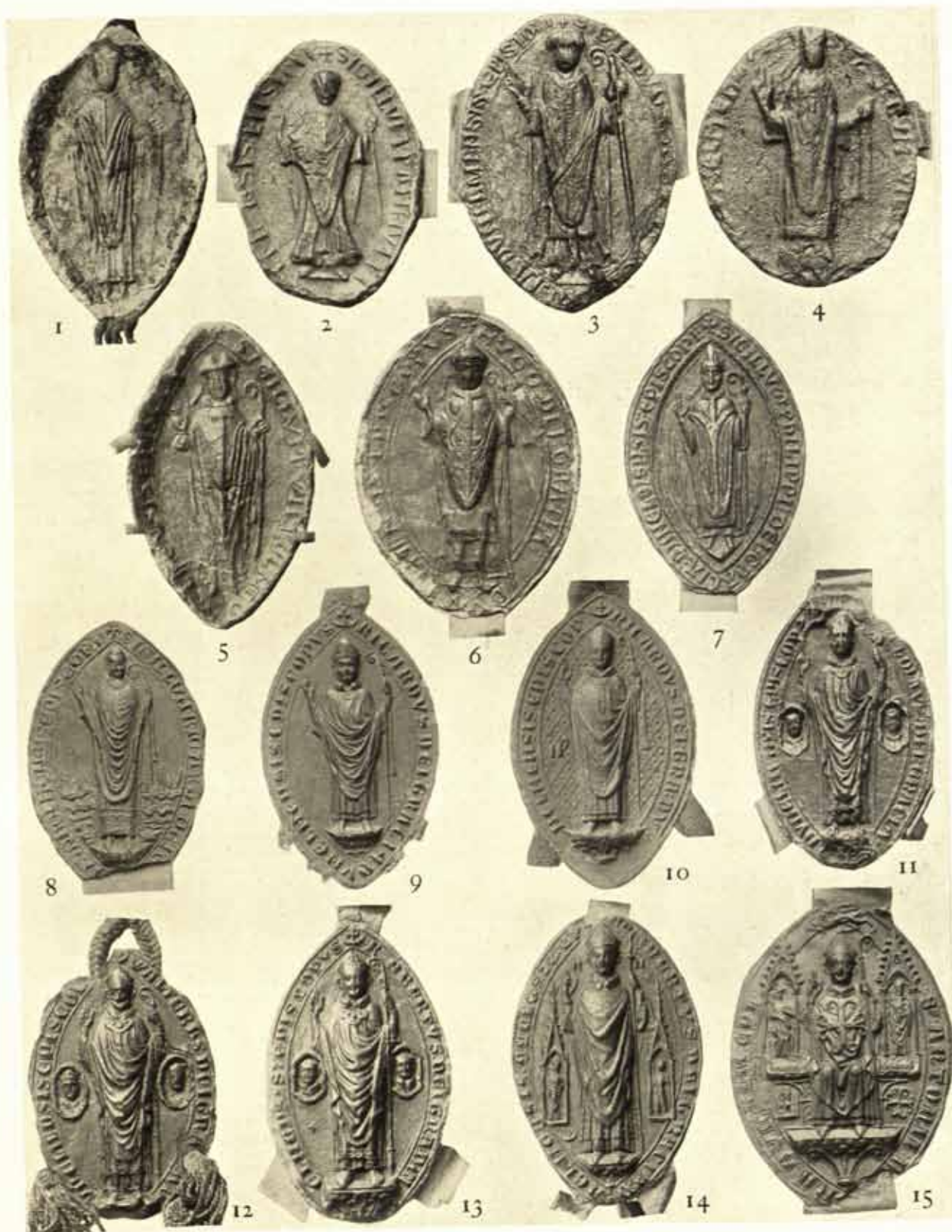
BISHOPS OF DURHAM: SEALS OF DIGNITY (2-3)

1. William of St. Calais, 1081-96, a forgery; 2. Ranulph Flambard, 1099-1128; 3. Geoffrey Rufus, 1133-40; 4. William of Ste. Barbe, 1143-52, 1st seal; 5. William of Ste. Barbe, 2nd seal; 6. Hugh Puiset, 1153-95; 7. Philip of Poitou, 1197-1208; 8. Richard Marsh, 1217-26, 1st seal; 9. Richard Marsh, 2nd seal; 10. Richard Poore, 1228-37; 11. Nicholas Farnham, 1241-49; 12. Walter Kirkham, 1249-60; 13. Robert Stichill, 1261-74; 14. Robert of Holy Island, 1274-83; 15. Anthony Bek, 1284-1311.

each side of his figure is the tonsured head of a monk placed in a deeply sunk eight-foiled panel. These are noteworthy, for they mark the first step in the changes to come by which the figure of the bishop gradually ceases to be the chief motive on his seal and saints become predominant whilst the bishop kneels in prayer beneath or is only represented by his shield of arms. His successors Walter Kirkham (A.D. 1249–1260) and Robert Stichill (A. D. 1261–1274) make little alteration except that, on the seal of the former, the monks' heads on either side give place to the mitred bust of St. Cuthbert and the crowned bust of St. Oswald, the first appearance on a seal of dignity of these great north country saints (pl. I, 12). Robert of Holy Island (A.D. 1274–1283) makes a further important change. The full-length figures of St. Cuthbert and St. Oswald, standing in crocketed and canopied niches, take the place of the busts of the previous seals marking another step towards the growing predominance of the saints (pl. I, 14). Antony Bek (A.D. 1284-1311) completely changes the style of his seal from that of all its predecessors (pl. I, 15). He alone among his fellows of Durham chooses to be represented, a majestic and very dignified figure, seated on his throne, flanked on each side by a canopied niche. In the dexter stands St. Oswald, in the sinister St. Cuthbert. The motive reflects Bek's proud spirit and the great powers he exercised in the bishopric, for it was under him that the rule of the bishops of Durham 'reached the zenith of palatinate sovereignty'. This seal is also very noteworthy, because on it, for the first time at Durham, armorial charges appear; his chasuble is emblazoned with the ermine mill-rind cross of his arms; this is a conventional representation to give prominence to his armorials, for though his 'Inventory'[1] tells of vestments so embroidered, it is not at all probable that the chasuble would be charged with its owner's arms.[2] Above the bishop's head

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[1] 'ij capis de uno panno albi, indici, et rubei coloris palliatis cum una cruce de armis eiusdem intextis quae dicuntur ferrum molendini' (*Wills and Inventories*, p. 12). His arms were gules a mill-rind cross ermine. He was a great warrior, and at Falkirk (A.D. 1298) commanded the second division. 'C'est la bataile l'euesk de Duresme la secund—Antoyn Beke porte de gulez, ou ung fer de molyn d'ermin' (*Reliquary*, vol. xvi, p. 30). There is a long stanza in praise of him in the song of the siege of Caerlaverock (A.D. 1300). He was not present in person, but he sent his banner of—

> Vermeille o un fer de molyn
> De ermine e envoia se ensegne.

(*The Roll of Caerlaverock*, ed. Thos. Wright, p. 22.) He was a younger son of Walter Bek, lord of Eresby, and differences his paternal shield by changing its silver cross to one of ermine (*Complete Peerage*, new ed., ii, 89; *Coll. Top. et Gen.*, iv, 344).

[2] But though it is very unlikely that even this proud prelate would make his chasuble into an armorial surcoat to his own glorification, it is yet quite possible that its orphreys might have been embroidered with small shields of his arms. The Lincoln Inventory records 'a chasuble of black cloth of gold of Baudekin with a red orphrey having . . . in the back the arms of the lord Rose', probably the donor (*Mon. Angl.*, i, 312, ed. 1718). See also *Catalogue of a Collection of British Heraldic*

is a leopard of England. A triple-towered castle, denoting his office of constable of the Tower of London,[1] is beneath the dexter side of his throne; beneath the sinister is a repetition of the mill-rind cross of his own arms. The importance of Bek's own personality is obviously the guiding motive of the seal.

With Richard Kellawe (A.D. 1311–1316), a man of lowly origin reared in the traditions of the convent, we return to the line of development broken by Bek; but with a further change, for now the bishop stands between his attendant saints Cuthbert and Oswald (pl. II, 1). They form a single group standing in a triple canopied niche, the figure of the bishop, though still the centre and chief of the composition, is not now its sole dominant note, the saints are his partners. He had a special seal made for his use as Bishop elect; that is between the time of his election 31 March 1311 and his consecration at York 30 May in the same year (pl. III, 10). It is pointed oval, 48 mm. by 29 mm. in size, much smaller therefore than his seal of dignity. It represents our Lady with Christ with the bishop elect in pontificals kneeling in base:

S':RICARDI:DVNELM:ELECTI:COFIRMATI:III.

Lewis Beaumont (A.D. 1318–1333), a stranger to the see and convent, forced upon the unwilling monks by the king (Edward II), acting under the influence of his queen, was an arrogant, ignorant man. His seal reflects his character: its only motive is his own magnificence; like Bek's seal, it emphasizes the personal note, but with much less grace and dignity; its motive is mere ostentation (pl. II, 2). The bishop stands in gorgeous vestments, his chasuble blazoned with his arms, azure fleuretty a lion rampant gold,[2] his mitre and crozier are richly jewelled; over his head, above an elaborate canopy, is a leopard of England. In the field, which is diapered with lozenges enclosing fleurs-de-lis, on the dexter is a shield of the arms of England, on the sinister that of the kingdom of Jerusalem,[3] in memory of his grandfather Jean de Brienne,[4] King of

Art, Burlington Fine Arts Club, no. 56, a chasuble of brocaded blue satin whose cross-shaped orphrey was embroidered with numerous armorial shields.

[1] *Cal. Pat. Rolls*, A.D. 1272–1281, p. 92.

[2] Again probably a conventional representation, not an actual chasuble so embroidered. His armorials are those of Brienne differenced. Lewis and Henry Beaumont were the sons of Louis de Brienne, who, in right of his wife, was Vicomte de Beaumont. They took the name of Beaumont, and differenced their paternal arms of Brienne by changing the billets into fleurs-de-lis, the shield of Brienne being (azure) billetty a lion rampant (gold). (See also *Complete Peerage*, new ed., vol. ii, 59, and vol. v, 168). There is an account of the breaking of his two seals in *Scriptores Tres*, p. cxxviii (Surtees Soc. Publ. ix).

[3] This shield is a finely proportioned and beautiful early example of these arms, blazoned silver crusilly a cross potent gold: d'argent ove une croice martellée d'or et poudrée de croicelettes d'or (*Coll. Top. et Gen.*, ii, 320). It is drawn with a plain cross between fourteen small ones by Matthew Paris on the margin of his *Historia Minor* (Rolls Series, iii, 95).

[4] His father, Louis de Brienne, Vicomte de Beaumont, was a younger son of Jean de Brienne,

Jerusalem (A.D. 1209-1237).   He also, like Kellawe, used a small seal (pl. III, 11),
51 mm. by 31 mm., as Bishop elect before consecration (Sept. 1317—Mar. 1318).
It depicts our Lady with Christ seated in a canopied niche with a key on each
side, in the field.   Beneath Lewis kneeling prays.   He is not in episcopal
vestments:

<div align="center">S' : LVDOVICI : ELECTI : DVNELMENSIS : CONFIRMATI.</div>

Only one seal of Robert Graystanes (A.D. 1333), the monk historian of the
monastery, survives.   He was elected and consecrated bishop [1] after the death
of Beaumont, but he did not receive confirmation, and almost immediately
resigned in favour of Richard of Bury, who had received the appointment from
the king.   His seal reverts to the older type.   He stands beneath a canopy on
a diapered background in plain vestments.   A roundel on the dexter contains
the crowned head of St. Oswald, that on the sinister the mitred head of
St. Cuthbert (pl. II, 3).   His famous successor, Richard d'Aungerville of Bury
(A.D. 1333-1345), used two seals of dignity; on both the patron saints are
ignored and he himself is the chief motive of the seal.   On his first seal
he is represented standing on a carved bracket in an architectural niche
with crockets and finials; above his head is a shield of the royal arms
(pl. II, 4).   His second seal is well known (pl. II, 5); on it the wonderful
art of the fourteenth-century engraver reaches its greatest perfection.   The
learned prelate stands in a richly decorated, panelled, and canopied central
niche.   His pose is graceful and dignified, his face very austere, indeed it has
been considered, probably with truth, to be an actual portrait of the bishop.
This central figure is flanked on either side by smaller niches of 'pierced and
piled up tabernacle work' with spire-like finials in which, as on an altar reredos,
stand small figures of saints of very minute detail.   Above, in the middle niche
of the central canopy, is our Lady seated with Christ; on her right, in small
niches, stand St. John Baptist and St. Peter; on her left St. Catherine and St.
Paul.   All this wealth of ornamentation does but throw into relief the gracious
central figure and acts as a foil to the simplicity of his flowing vestments.   The
line of the surrounding legend is broken on each side by a shield of the royal
arms.[2]   This shield is used only, at Durham, on this seal and on that of Lewis

King of Jerusalem, Emperor of Constantinople (A. D. 1209-1237) (*L'Art de Vérifier les Dates*, ed. 1770,
366; *Complete Peerage*, ii, 59, note *b*).

[1] *Scriptores Tres*, p. 120 (Surtees Soc. Publ. ix).

[2] His own shield was gules a cinquefoil ermine and a border sable bezanty.   A similar shield is
blazoned for Sire John Daungervile de goules a un q̄ntefoil de ermyne ad la bordur̄ de sable
(*Genealogist*, N. S., xii, p. 269, no. 814).   It is also painted on the lid of an ancient chest formerly in
the Chancery court at Durham, which from the armorials upon it must be dated at the time of this
bishop (see illustration, *Arch. Ael.*, N. S., xv, 296).

Beaumont. Both received the preferment by the king's influence, and they thus express their devotion and gratitude to their royal patron.

The seals of the three succeeding bishops, Thomas Hatfield (A.D. 1345-1381), John Fordham (A.D. 1382-1388), Walter Skirlaw (A.D. 1388-1406), are all of similar design. On them the bishop no longer occupies the chief place—he either kneels in base or is symbolized by his armorial shield. Saints standing in canopied niches form the dominant motive. Hatfield's seal represents St. Cuthbert of Durham and St. Thomas of Canterbury, his name saint; above them is our Lady crowned and enthroned with the Christ child. Beneath all is a shield of the bishop's arms, a chevron between three lions rampant (pl. II, 6).[1] Fordham kneeling in base worships St. Oswald and St. Cuthbert, his shield, a chevron between three crosses patonce,[2] is placed on the tracery at each side of the central device. Angels under pent-houses adore our Lady and Christ enthroned in the topmost niche (pl. II, 7). Skirlaw places St. Cuthbert in a large central niche; on his right hand is St. Peter, on his left St. Andrew, the patron saints of his former see of Bath and Wells. His shield, bearing a cross of six interlacing bastons,[3] alone represents this pious and benevolent prelate (pl. II, 8). There are no known impressions of the seals of dignity of Thomas Langley (A.D. 1406-1437) nor of Robert Neville (A.D. 1438-1457). I am inclined to think that they did not use the type, but made that of 'ad causas' do duty for it. There are numerous documents in the treasury at Durham under their different seals, some of which one would have expected to issue under that of dignity. This belief is strengthened by the fact that the seal of dignity of Lawrence Booth (A.D. 1457-1476) is the same in size and motive as the 'ad causas' seal of Neville. He and his successors use only the one seal for both purposes. On them our Lady, robed, crowned, and enthroned with the child Christ, becomes the central figure; St. Oswald stands on the dexter and on the sinister St. Cuthbert. Above, in a traceried panel, is either the emblem of the Trinity or our Lord standing in glory. The armorials blazoned on these later seals form their chief interest. Lawrence Booth kneels in base, holding in

[1] The blazon is: azure a chevron gold between three lions rampant silver. This is the blazon of the shields on his tomb on the south side of the choir at Durham, beneath the splendid episcopal throne built by Hatfield during his lifetime. The shield is also on the orphrey of the alb on his effigy, having on each side of it the royal arms: France and England quarterly. It is also in painted glass in the window of the hall of the prior's house, now the deanery.

[2] The blazon is: sable a chevron between three crosses patonce gold (*L'Armorial de Gelre*).

[2] The blazon is: silver with the cross sable (Glover's *Ordinary*). He was buried in the north aisle of the choir at Durham before the altar of St. Blaise, ' under a faire marble stone very sumptuously beset with many brasen images having his owne image most artificially portred in brasse in the midst thereof' (*Rites of Durham*, p. 18; Surtees Soc. publ., vol. cvii). This has disappeared, but the stone bench running along the north wall of this bay of the aisle has in front a range of twelve cusped panels, in each of which is a shield of Skirlaw's arms.
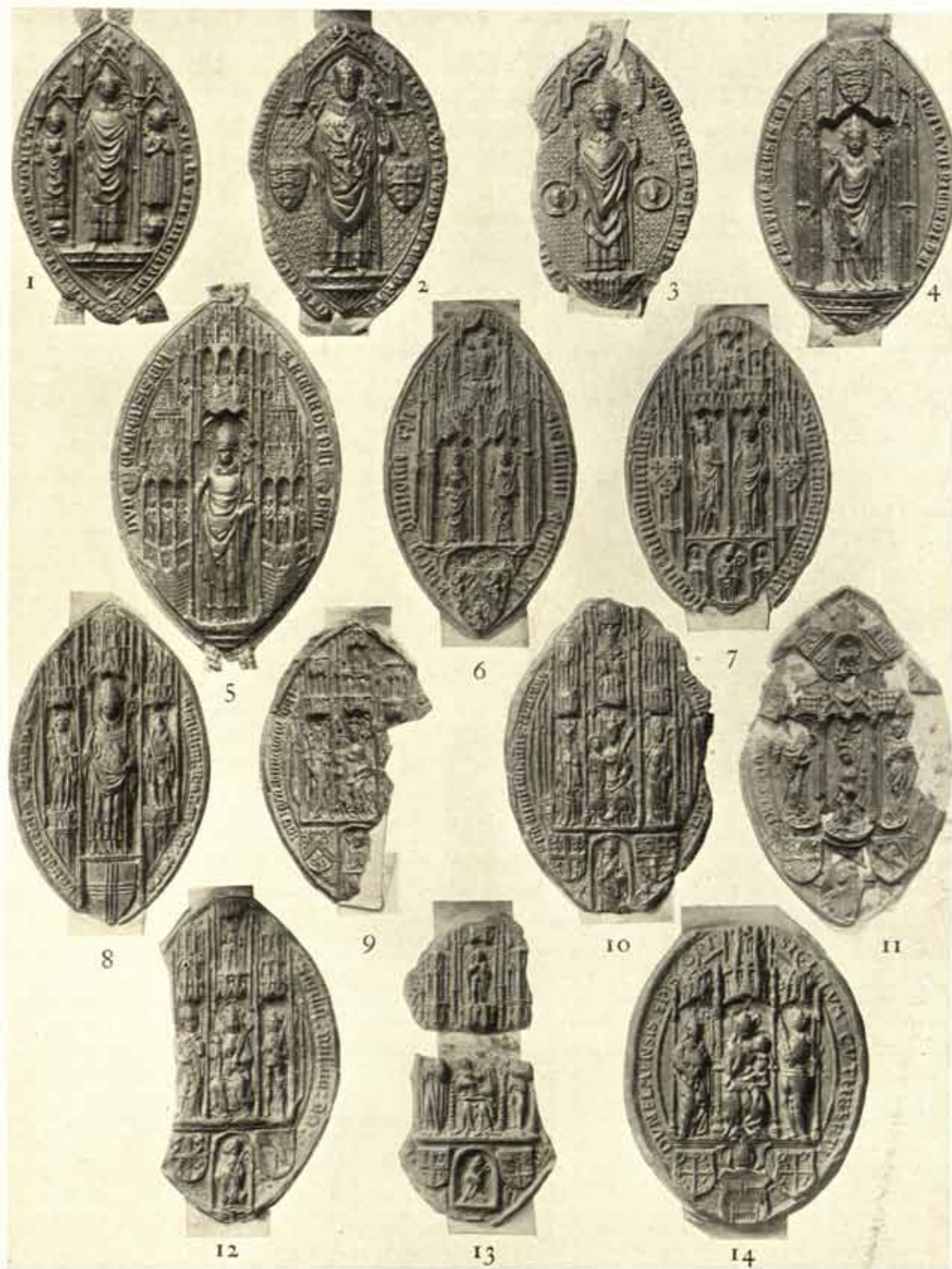
BISHOPS OF DURHAM: SEALS OF DIGNITY (2-3)

1. Richard Kellawe, 1311-16; 2. Lewis Beaumont, 1318-33; 3. Robert Graystones, 1333; 4. Richard of Bury, 1333-45, 1st seal;
5. Richard of Bury, 2nd seal; 6. Thomas Hatfield, 1345-81; 7. John Fordham, 1382-88; 8. Walter Skirlaw, 1388-1405;
9. Laurence Booth, 1457-76; 10 William Dudley, 1476-83; 11. Richard Fox, 1494-1501; 12. William Senhouse, 1502-05;
13. Thomas Ruthall, 1509-23; 14. Cuthbert Tunstall, 1530-59.

front a shield of his arms, three boars' heads rased and erect in an engrailed border (pl. II, 9).[1] On his dexter is another shield charged with a chevron between three lions rampant, borne, I suspect, for the monastery, though really the arms are those of Bishop Hatfield. On his sinister is the shield of the bishopric bearing the arms attributed to St. Oswald, a cross between four ramping lions.[2] William Dudley (A.D. 1476-1483) kneels between his own quarterly shield[3] (I and IV, two lions passant; II and III, a cross patonce) and that of the see (pl. II, 10). There is no example of this type in the treasury, or elsewhere, for John Sherwood (A.D. 1484-1494). Richard Fox (A.D. 1494-1501), whose seal is classical in design, adopts the same arrangement; his own shield bearing a pelican in her piety (pl. II, 11).[4] William Senhouse (A. D. 1502-1505) returns to a debased type of Gothic, with himself kneeling between his own quarterly shield,[5] with a dove in the first and fourth quarters, and that of the see; the legend also reverts to black letter (pl. II, 12). Christopher Bainbridge (A. D. 1507-1508) is not represented by this type. Thomas Ruthall (A. D. 1509-1523) uses with slight alteration the same style as that of Senhouse, though the sculpture of the figures is much finer (pl. II, 13). The impressions are very imperfect, but the legend seems to be a rather ornate form of Renaissance capitals.[6] Thomas Wolsey (A. D. 1523-1528) was never at Durham during his tenure of the see, nor is there any example extant of his seals for the bishopric.

The series comes to an end with Cuthbert Tunstall (A. D. 1530-1559), whose seal has no beauty to recommend it, except perhaps the bishop's shield in base charged with three combs[7] and ensigned with his mitre. It is placed between two badly drawn shields, on the dexter that of the monastery, a cross flory between four lions rampant, and on the sinister that of the see (pl. II, 14).

[1] The blazon is: silver three boars' heads rased and erect sable, a border engrailed sable (Glover's *Ordinary*).

[2] The arrangement of the shields on this seal is the same as that on the 'ad causas' seal of his predecessor, Robert Neville. See note on Neville's seal, *post*, p. 14, note 2.

[3] The blazon is: I and IV, gold two lions passant azure (Somery, afterwards Sutton, alias Dudley); II and III, silver a cross patonce azure (Sutton). His tomb is in the chapel of St. Nicholas in the south ambulatory of Westminster Abbey. His effigy in brass and the inscription are now destroyed. The shield there was quarterly: I, gold a double-tailed lion rampant vert (Dudley); II and III, a cross patonce (Sutton); IV, two lions passant (Somery) (*Herald and Genealogist*, v, 118, note 1).

[4] Blazoned azure a pelican in her piety gold. Bishop Fox was very fond of this symbol of the Atonement; he used it both for his arms and as a badge. It is to be seen on his buildings at Oxford, Cambridge, and Winchester, as well as at Durham.

[5] He is sometimes called Sever, Severs, or Seners, but Senhouse, as given by Stubbs in the *Registrum Sacrum Anglicanum*, seems to be the correct form. I cannot find the blazon of his shield.

[6] His shield, badly balanced and overcrowded, is an excellent example of the decadent heraldry of Tudor times. It is blazoned: Party azure and gules a cross engrailed gold between four doves gold with sable collars, on a chief quarterly ermine and gold two roses gules.

[7] The blazon is: sable three combs silver.

This type is, however, valuable, not only for the history of the development of an art, but also for the history of episcopal vestments. From this aspect their known date and personal nature must again be emphasized. Each seal bears an image of or, later, symbolizes the bishop; it would be made under his personal direction: it reflects therefore his tastes, and represents him as he wished to be. The small size of the seals rather depreciates their value from this point of view, but still they will repay a little study. The mitre appears in its early form of a round cap on the seals of Flambard (A. D. 1099–1128) and Rufus (A. D. 1133–1140). Sainte-Barbe (A. D. 1143–1152) wears it depressed in the centre, with a rounded cone at each side, as though a band or orphrey had been carried over the centre of a round cap, from back to front; his second seal has the horns more pointed and shows the *infulae* falling behind at either side. Puiset (A.D. 1153–1195), first of the English bishops, wears it in the modern style with the horns at back and front.[1] It is low and triangular with horizontal and vertical orphreys. This style, with a tendency to become oval, higher, and more decorated, lasts for the first two centuries. The richly jewelled mitres of the later fourteenth century are well illustrated by that on the second seal of Richard of Bury, described among the vestments in his 'Inventory' as 'unam mitram brudatam cum multis parvis perlis diversi coloris et cathenis et nodis aureis '.[2] The singularly ungraceful mitres of exaggerated height worn later can be seen on the obverse of the bishops' great seals in Chancery. The amice appears first as a folded cloth loosely knotted in front; it takes the later form of an embroidered collar on the seal of Richard Marsh. The chasuble is, on the early seals, narrow and short in front, the back square and broad, falling almost to the ankles. It is at first represented covered with orphreys illustrating the description of Flambard's in his 'Inventory' 'unam casulam indici coloris cum largis orfrays '.[3] Those shown on the chasuble of Philip of Poitou consist of a vertical strip falling from the collar to the hem, from which two branch off low round the shoulders. That of Richard Marsh is quite unadorned and falls in graceful folds over his raised arms, possibly representing that described in his 'Inventory' 'i casulam rubeam de samette quae dicebatur Marrays '.[4] His immediate successors use a like style, sometimes rounded in front, sometimes coming more to a point, but always without orphreys, excepting the armorial chasubles of Bek and Beaumont. The later seals return to the plain vestment falling, rather low, in loose graceful folds. The curious breastplate ornament called the *rationale* is first shown at Durham on the seal of Richard Marsh; it is present on those of his successors

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[1] The earliest seal I know of, which shows the mitre worn in this manner, is that of Hugues, bishop of Auxerre (A. D. 1144). See Demay, *Le Costume d'après les Sceaux*, 270, fig. 332.

[2] *Wills and Inventories*, p. 25 (Surtees Soc. Publ. ii).

[3] *Op. cit.*, p. 2.   [4] *Op. cit.*, p. 5.

until Robert Stichill (A.D. 1261–1274), after whom it disappears. The tunicle is not visible on the seals, but the dalmatic is to be seen from the earliest. At first it is cut square in front and rather short, with wide slits at the side and short, broad sleeves. On the first seal of Richard Marsh it becomes longer and covered with fine diaper work; his second seal shows a square apparel on its lower edge and upon the sleeves; one or other of these styles of ornament appears on succeeding seals until Richard of Bury, on whose seal and on later examples it is without apparels or orphreys. The side-slits are first shown fringed on the seal of Robert of Holy Island (A.D. 1274). The lower edge of the alb, appearing beneath the dalmatic, is only to be seen. It is at first long and skirt-like, covering the feet; later it becomes shorter and less voluminous until Richard of Bury, when it is again shown falling in folds over the feet. The stole is very indistinct and difficult to distinguish from the folds of the alb. It is clear on the seal of Geoffrey Rufus and on some succeeding seals, but is only distinctly to be seen, as two embroidered and fringed ends above the alb, on the seals of Holy Island, Beaumont and Kellawe. On later seals it is not distinguishable. The maniple, named from the first in the different 'Inventories', is not to be seen on the seals until that of Sainte-Barbe (A.D. 1143–1152), after which it is generally visible as two narrow embroidered bands with fringed edges. The smaller vestments are very difficult to make out. Gloves with short gauntlets can usually be detected after Richard Marsh; the episcopal ring worn outside the glove on the middle finger of the right hand is only clearly seen on the seals of Holy Island, Bek and Beaumont. Sandals are obvious, but too small for any detail to be seen. There remains only the crosier. This is a plain crook with a knob where it is joined to the staff until Richard Marsh, whose crook has an ornamental fleur-de-lis at its end. Afterwards the tendency is to a more ornate form culminating in the highly enriched crosiers of Lewis Beaumont and Richard of Bury; the latter's is described in his 'Inventories' as 'i baculum pastorale argenteum cum capite deaurato'.[1]

The central design is always surrounded by the legend giving the bishop's name and title. This begins with a cross paty or sometimes with a crescent lying on its back enclosing the cross. On the earlier seals the words are in the form used by Ranulf Flambard:

✠ SIGILLVM : RANNVLFI : DVNELMENSIS : EPISCOPI.

Rufus is singular in adding the words

DEI : GRACIA.

Hugh Puiset adopts the style

✠ hVGO : DEI : GRATIA DVNELMENSIS : EPISCOPVS

[1] *Wills and Inventories*, p. 25.

the form which is used by his successors until Kellawe, who uses the words

✠ SIGILLVM : RICARDI : DEI : GRA : EPISCOPI : DVNELM.

This is the style used until Cuthbert Tunstall, who reverts to the earliest

✠ SIGILLVM : CVTHBERTI : DVNELMENSIS : EPISCOPI.

The type of letter used is Roman capitals until Puiset, on whose seal, though the type must still be called Roman, there is a very distinct approach to the Gothic form usually called Lombardic. This is the beautiful letter used on the seal of Philip of Poitou (A.D. 1197–1208) and is that, becoming smaller and finer as the years pass, which is used during the thirteenth and the first half of the fourteenth centuries. On Thomas Hatfield's (A. D. 1345–1381) seal it changes to the larger, more legible type of black letter which on Skirlaw's (A.D. 1388–1405) alters to the close, very illegible form. The type reverts at the end of the fifteenth century on Fox's (A.D. 1494-1501) seal to Roman capitals of the graceful Renaissance shape.

Counterseals (Poitou, A.D. 1197-1208, to Beaumont, A.D. 1318-1333).

Philip of Poitou, first of the Durham bishops, uses a counterseal. Before him the seal of dignity is the only type of which impressions remain. That the earlier bishops used at least one other seal seems certain, for in their ' Inventories', where the destruction of their seals is recorded, the plural is in each case used—' fracta fuerunt sigilla eiusdem et Sancto Cuthberto oblata '.[1] This second seal would probably be a *secretum* or private seal which, used chiefly for closing, has not survived. It is worthy of note that not one of the bishops of Durham uses an antique gem for a private or a counterseal, as do so many of their contemporaries of other sees. Poitou's counterseal is a reproduction in miniature of his seal proper (the broom omitted) (pl. III, 1). The legend also reproduces, though in an abbreviated form, that on the obverse. Its shape, and the shape of all that follow it, is a pointed oval of considerably smaller size than the seal itself. The extra space thus provided is happily used by Richard Marsh to represent, for the first time on Durham episcopal seals, Saints Cuthbert and Oswald (pl. III, 2). On his counterseal they stand one on either side of our Lord in Glory and the bishop kneels, in prayer, beneath. The legend is in Latin rhyming hexameter verse called Leonine:

✠ hOC : ONVS : VT : SIT hONOS TIBI : LARGIOR : hOS : Q : PATRONOS.

This is the type of all these seals at Durham, except Bek's. They represent, either singly or together, the patron saints of the cathedral priory, our Lady,

[1] *Wills and Inventories*, pp. 1–2.
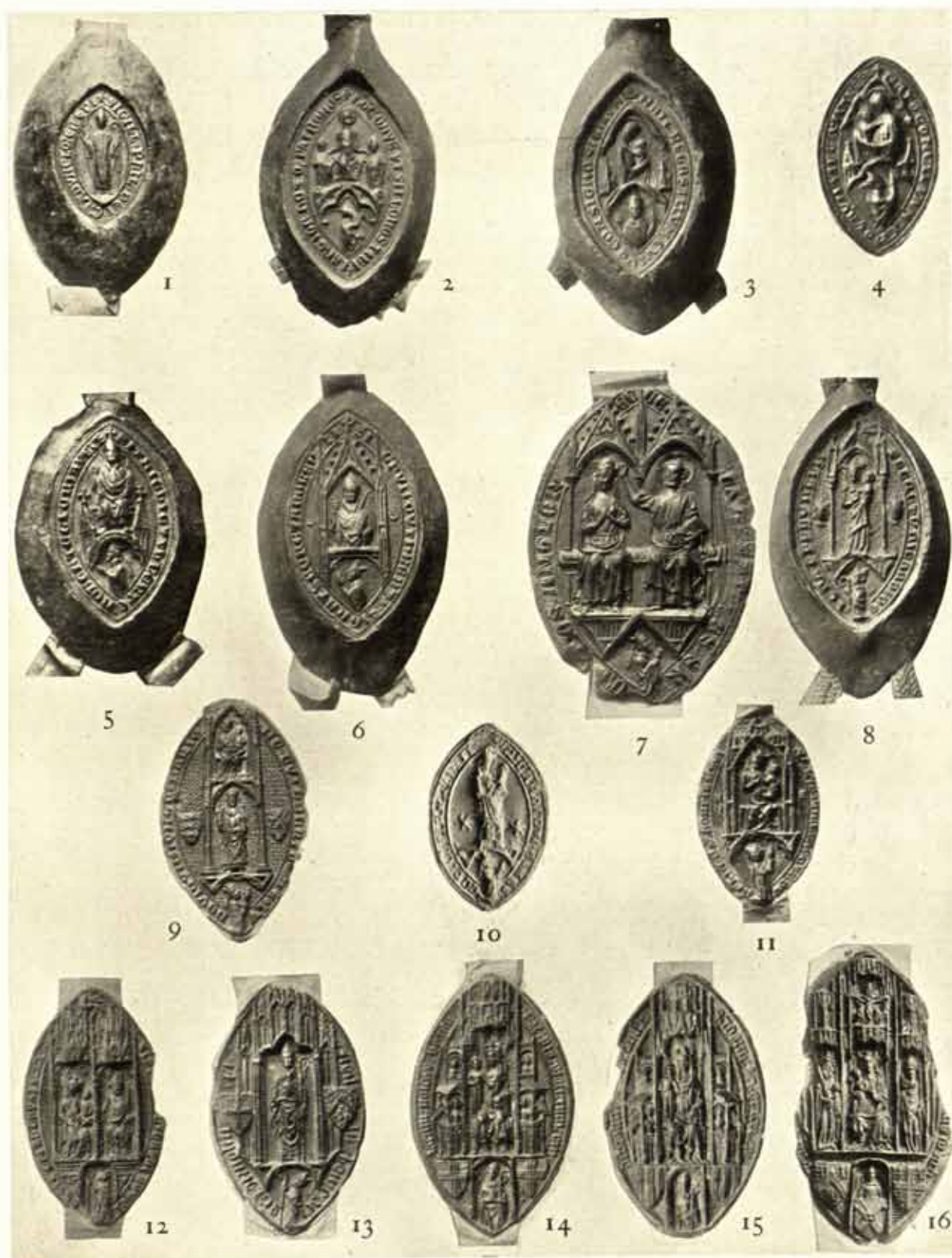
BISHOPS OF DURHAM: COUNTER SEALS, SEALS AD CAUSAS, ETC. (2-3)

1. Philip of Poitou, counter seal; 2. Richard Marsh, counter seal; 3. Richard Poore, counter seal; 4. Nicholas Farnham, counter seal; 5. Robert Stichill, counter seal (Kirkham's counter seal with altered legend); 6. Robert of Holy Island, counter seal; 7. Anthony Bek, counter seal; 8. Richard Kellawe, counter seal; 9. Lewis Beaumont, counter seal; 10. Richard Kellawe, as bishop-elect; 11. Lewis Beaumont, as bishop-elect; 12. Richard Bury, seal ad causas; 13. Thomas Hatfield, seal ad causas; 14. Walter Skirlaw, seal ad causas; 15. Thomas Langley, seal ad causas; 16. Robert Neville, seal ad causas.

St. Oswald, and St. Cuthbert; the ornamental details following, in the main, those we have noted on the seals of dignity. The legends are all in Leonine verse:

Poore—⚓NATA : RAGAS : ILLVM : CVIVS : CONSIGNO : SIGILLVM (pl. III, 3).
Farnham—✠ FATO : CONCILIA : NICHOLAVM : VIRGO : MARIA (pl. III, 4).

Bishops Kirkham, Stichill, and Holy Island all invoke St. Cuthbert—

✠ PRASVL : CVThBARTA : RAGNAM : SVPAR : AThARA : PAR : TA.
✠ SIT : MICHI : CVThBARTA : ROBARTO : GLORIA : PAR : TA (pl. III, 5).
✠ SIGNVM : CVThBARTI : SIGNAT : SACRATA : ROBARTI (pl. III, 6).

Antony Bek's counterseal (pl. III, 7) is of the same size as his seal of dignity. It represents, with all the charm of late thirteenth-century art, the Coronation of our Lady. She and our Lord are shown seated side by side on a throne beneath a graceful double canopy with side shafts and delicately carved capitals. The bishop kneels beneath:

ACCA : AXALTATA : AS SR : ChOROS : ANGL'OR.

Richard Kellawe's is of the earlier style, our Lady with Saints Oswald and Cuthbert (pl. III, 8). It is the first of this type to be named a secret seal:

S' SACRATV' : RICARDI DAI GRA. API. DVNALM.

Lewis Beaumont introduces armorial shields. On his seal St. Cuthbert stands between the shield of England and that of Beaumont (pl. III, 9).[1] Beneath the bishop prays—

MA · CVThBARTA · PIA · LVDOVICVM IVNGA MARIA.

This is the last example of the type at Durham. It is perhaps worthy of note that from about this date (A.D. 1333) the motive which has inspired the designs upon them is transferred to the seal of dignity. Saints are now its dominant note as had been that of the counterseals for more than a century.

'*Ad causas*' Seals (Bury, A.D. 1333-1345, to Neville, A.D. 1438-1457).

This type of seal was that used by the bishop in his judicial capacity: it thus became the usual seal affixed to mandates of an official kind dealing with individual causes. They are in shape a pointed oval and smaller than the seal of dignity, averaging about 63 mm. by 38 mm., though towards the end of the series they become larger. They depict in canopied niches one or other of the tutelar saints of the cathedral priory with the bishop praying beneath; armorial shields appear upon them after that of Richard of Bury. The legends are like those

[1] Azure fleuretty a lion rampant gold. See *ante*, p. 6, note 2.

on the seal of dignity with 'ad causas' added, except that of Skirlaw (pl. III, 14), which reads:

fac : pia : Walterum : causarum : noscere : verum.

Robert Neville's (A.D. 1438-1457), the last of the series, is larger and more elaborate than the earlier ones (pl. III, 16); it is a very beautiful seal, the details of the sculpture being carefully worked out. The armorials upon it are interesting. Beneath, in the centre, an angel with outspread wings supports the differenced Neville shield.[1] On each side is a shield of arms, the dexter bearing a chevron between three lions rampant, the sinister a cross between four lions rampant, the shield attributed to St. Oswald and blazoned *azure a cross gold between four lions rampant silver*; this is the earliest appearance of these arms, afterwards borne for the bishopric.[2] The legend reads:

sigillu ad causas roberti Neville epi.dunelmensis.

After this date, as I have before mentioned, the seal of dignity at Durham serves the purposes of both; the design on the 'ad causas' seal being now transferred to that of dignity.

Secret or Privy Seals (Hatfield, A.D. 1345-1381, to Dudley, A.D. 1476-1483).

Though Kellawe's *secretum* used as a counterseal foreshadows the privy seal, it is not itself used as such. But the counterseal of his successor, Beaumont, is used both for that purpose and for a privy seal. It is strange that we have neither a counterseal nor a privy seal for Bury. His successor, Hatfield, first at Durham, and indeed first of the English episcopate, introduces the round armorial *secretum* which we usually speak of as the privy seal. This seal was used for the private letters and business of the bishop, and it was under it that precepts issued to the chancellor of the Palatinate ordering writs and letters patent to

[1] He was the fourth son of Ralph, first earl of Westmorland, by his second wife Joan, daughter of John of Gaunt (Surtees, *Durham*, iv, 161). The blazon is gules a saltire silver differenced by a gimmel ring gules.

[2] This is the first of the episcopal seals of the bishopric upon which the official arms of the see appear. The dexter shield is difficult to account for, it is obviously that of Bishop Hatfield; but why, after more than half a century, it should be used is not obvious; possibly it may have been blazoned upon something connected officially with the bishopric and so used in ignorance of its true origin. The shield of St. Oswald on the sinister bears the arms of the see, and is so used by succeeding bishops, except Ruthall, who makes the cross patonce. That they were the recognized arms of the bishopric before Bishop Neville's time is probable, for they appear on the 'sede vacante' seal of Henry VI, used during the vacancy after Bishop Langley's death, November 1437 to April 1438 (see *post*, p. 21). The shield of the priory was that attributed to St. Cuthbert. It is the same as St. Oswald's, except that the cross is patonce. These arms appear on the seals earlier than those of the see, being first used on that of Prior Robert Berrington of Wallworth (A.D. 1374-1391) and afterwards by his successors; always with the cross patonce (see also Tonge's *Heraldic Visitation of 1530*, Surtees Soc. Publ. no. 41, p. 31; and *Catalogue of Durham Seals*, nos. 3441-9).

BISHOPS OF DURHAM: PRIVY SEALS AND SIGNETS (1-1)

1. Thomas Hatfield, privy seal; 2. John Fordham, privy seal; 3. Thomas Langley, privy seal; 4. Robert Neville, privy seal; 5. William Dudley, privy seal; 6. Thomas Langley, signet; 7. Robert Neville, signet; 8. William Dudley, signet; 9. William Senhouse, signet.

issue under the great seal. These seals are all of the same type. They bear the bishop's armorials emblazoned on a straight-topped, broad-based shield, a shape evidently used the better to display the charges and contrasting with the smaller, heater-shaped ones borne, by the bishops as lords palatine, on the reverse of their great seals. Hatfield's is a finely conceived design (pl. IV, 1). The shield (azure), a chevron (gold) between three lions rampant (silver), is placed between two trees with a full-faced sitting lion supporting it on each side. Above and behind the shield is a demi-figure of our Lady, robed, crowned, and sceptred, holding the child Christ. The legend reads

secretū : Thome : dei : gracia : epi : Dunolm.

The same legend, with alteration of the name, is used on all of this type at Durham.

Fordham's shield, (sable) a chevron between three crosses patonce (gold), is delicately diapered with foliage and placed within cuspings of fine tracery. It is supported by a kneeling angel on either side, above it being his motto in black letter, **da gloriam deo** (pl. IV, 2). There is no known example of this type for Walter Skirlaw. Langley's shield,[1] paly of six (silver and vert), a pierced molet (silver), is supported from behind by an angel represented standing in the midst of the episcopal city (pl. IV, 3). The shield, (gules) a saltire (silver), a gimmel ring for difference, on Neville's noble seal, is couched; above it is a jewelled mitre from between whose horns issues the bull's head Neville crest (pl. IV, 4). The embroidered and fringed ribbons of the mitre flow out at each side of the shield. Behind the crest is a scroll bearing the bishop's motto **en grace affie.** Above the shield on the dexter is a letter, possibly **M** (for Maria). The sinister side of the seal is destroyed. Lawrence Booth is not represented by an example of this seal. William Dudley's, the last of the type, shows his quartered shield placed upright, and above it a splendid jewelled and coronetted[2] mitre, the embroidered ribbons of which are draped at each side of the shield (pl. IV, 5).

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[1] His tomb in the Galilee at Durham, in front of the great west doorway of the church, was made during his lifetime. At its west end are three panels, in each of which is a shield of his arms (*Scriptores Tres*, 147; *Rites of Durham*, p. 44, Surtees Soc. Publications, no. ix and no. cvii).

[2] It is not at all probable that the bishops of Durham actually wore a coronet round their mitre, but that they used it as a symbol of their palatine rank seems certain. From the time of Hatfield onward it is never absent from the reverse of their great seals, and though it might be considered there to be merely a crest coronet, it is not possible to account for it thus on this seal. Nor is it possible so to account for those carved on the desk-ends in the chapel of Durham Castle, around the mitre placed above the shields of Bishop Ruthall and of the see, or above Langley's shield on the stalls in Auckland church. That the coronet had some official significance appears from its use round the mitre on the shrievalty seals of John Menville, Bishop Bury's sheriff, and of Robert Laton, Fordham's sheriff (see *post*, p. 23). For its use in post-reformation days see *The Herald and Genealogist*, viii, 137.

Signets (Langley, A.D. 1406 1437, to Senhouse, A.D. 1502–1505).

This small seal, worn in a finger ring or otherwise carried upon the person, was used chiefly for closing private letters. There are only examples of it at Durham for Langley, Neville, Dudley, and Senhouse. The first uses the molet from his shield of arms and upon it places the letters of his name **l.a.n.g.l.e.p.** (pl. IV, 6). Neville has two different devices, the first is his shield of arms in miniature with his 'word', as on his privy seal, on a surrounding scroll (pl. IV, 7); beneath the shield is another gimmel ring. His second is merely the gimmel ring with the initials of his name **t n** within it, and around it his motto as before. Dudley used his quartered shield, as on his privy seal, in miniature, surrounded by the motto **space · and · grace** (pl. IV, 8). That of Senhouse is shield-shaped and bears upon it a spurge surrounded by crosier heads without any motto (pl. IV, 9). This type of seal would almost certainly be used by the succeeding bishops of our period, but no examples have survived.

Great Seals in Chancery (Hatfield, A.D. 1345–1381, to Tunstall, A.D. 1530–1559).

The bishops of Durham as lords palatine[1] had a temporal chancellor and chancery of their own, whence issued writs, letters patent, and other documents under their great seal. This was a round seal averaging about 80 mm. in diameter, though some of the later examples are rather larger. Like the royal great seal, from which it was obviously adopted, it had two sides, an obverse and a reverse. There is a forerunner of it in a small round single-faced seal, about 55 mm. in diameter, used by Richard of Bury (pl. V, 1). This is unfortunately imperfect, but the part of the legend remaining shows that it was a chancery seal— ... **CGLLARIG : RICARDI**. ... The device is St. Cuthbert, as bishop, seated on a panelled throne placed in the centre of rich tracery. The great seal proper was, very fittingly, introduced by Hatfield, to whom Edward III specially confirmed the palatine privileges of the bishopric and who freely used his great powers. The obverse of the type represents each bishop in pontificals, seated in majesty on his throne; the reverse is equestrian, representing him, in the full armour of his period, as lord palatine. The legends, usually the same on both sides, are in black letter until Richard Fox (A.D. 1494), on whose seal and on

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[1] The new edition of the *Complete Peerage*, iv, 559, states that 'their real rank was that of barons (*domini*) not of earls (*comites*)'. It should, however, be noted that in a letter from Edward III to Alexander Neville, archbishop of York, dated 17th July 1376, the king says that the bishop of Durham is earl palatine ('episcopus Dunelmensis comes palatinus existat'), and as such has temporal jurisdiction over his subjects, exercised by his own officers (*Scriptores Tres*, App., no. cxxvi, Surtees Soc. Publ. xi).

BISHOPS OF DURHAM: GREAT SEALS IN CHANCERY

1. Richard of Bury; 2. Thomas Hatfield; 3. John Fordham; 4. Walter Skirlaw; 5. Thomas Langley; 6. Robert Neville. 1 to 4 (2-3), 5 and 6 (c. 1-2)

those of his successors Renaissance capitals are used. The words composing it are in one of two forms, either as on Hatfield's –

sigillū : thome : dei : gra : dunolm : epi.

or else as on Skirlaw's—

Walterus : dei : gra : episcopus : dunolmensis.

the latter being the more frequently used.

The obverse of Hatfield's seal represents him seated on an open throne, beneath a triple-arched canopy. He holds a book in his left hand, his crosier in his right. The legend is arranged in two vertical lines, one on each side, outside the throne. On the reverse he bears a heater-shaped shield charged with a chevron between three lions rampant; these arms are repeated on the trappings of his horse. His sheathed sword hangs at his side. His helm is encircled by a coronet from which rises a mitre from between whose horns issues a fine bush of feathers.[1] It is not a well-designed seal on either side, and compares very unfavourably with both the earlier and later seals of the bishopric (pl. V, 2). The obverse of that of the three succeeding bishops, Fordham, Skirlaw, and Langley, is of the same design for each, with the needful alterations of name and armorials (pl. V, 3–5). The bishop is represented seated and blessing. His throne is panelled and canopied, and is flanked on each side by a small niche of fine tracery; in the dexter stands St. Michael clothed in long flowing robes, his wings raised and half opened. He bears a small heater-shaped shield charged with a plain cross, and thrusts a spear down the dragon's throat. In the sinister niche is St. George, a martial figure in the armour of the period; he also pierces the dragon with his spear and bears the same cross on his shield. Beyond these niches, at either side, is a shield of each bishop's arms as on the reverse of his seal. The pediment of the throne is supported by two sitting lions. The reverse of Fordham's shows him clad in an armorial jupon, (sable) a chevron between three crosses patonce (gold) (pl. V, 3). He carries a long heavy sword and a small heater-shaped shield on his arm. His helm is mantled and coronetted; a mitre rises above it upon whose horns stands a dove poised for flight.[2] The housings of his horse are diapered with foliage and blazoned with his armorials. The field of the seal is strewn with small flowers and the inner

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[1] A similar bush of feathers, subsequently altered into plumes of ostrich feathers, was used by those of his successors who did not use a personal crest. In the Parliamentary roll of A.D. 1515 (ed. Willement) the mitre of the bishop of Durham has a coronet from which rise seven ostrich feathers (see also *The Herald and Genealogist*, viii, 139).

[2] His achievement in *L'Armorial de Gelre* shows the dove standing on a ball placed between the horns of the mitre, and bearing in its beak a scroll on which is **gloria deo** (*Ecclesiastical Heraldry*, by John Woodward, pl. v, no. 1).

border finely cusped, each cusp ending in the cross patonce of the bishop's arms. Skirlaw's is like it, though plainer in design (pl. V, 4). His jupon, shield, and horse-trappings are blazoned with his arms, (silver) a cross of six interlaced bastons (sable). The horse-trappings are finely diapered with foliage. His crest, an angel with outspread wings, rises direct from his coronetted helm; there is no mitre. The field of the seal is powdered with roses. The reverse of Langley's is again very similar (pl. V, 5). His armorials are paly (silver and vert) a pierced molet (silver). His crest, a luxuriant bush of feathers, rises, without a mitre, straight from his coronetted helm. The field is powdered with the pierced molet of his arms. Robert Neville changes the style of both faces (pl. V, 6); on the obverse the tabernacle work of niches is more ornate and the emblem of the Trinity is placed in an upper canopy. St. Michael is represented in a garment covered with feathers, brandishing a sword and holding a shield with charges of an indeterminate nature. St. George is in skirted armour without a shield and with bare head surrounded by a halo. He stands stolidly on the dragon, his spear at its throat. In front of the throne's pediment is the bishop's shield and at each side a crouching lion. The reverse shows the bishop, in a later style of armour than his predecessors, on a galloping horse. His shield and horse-trappings display his armorials. His bull's-head crest issues from between the horns of a mitre which itself rises from his coronetted helm. The field is diapered with flowers and foliage. The horse gallops over ground pied with daisies; its neck is armed with plates and it has a spiked frontal with fan crest. The seal of Lawrence Booth is smaller than the earlier ones (pl. VI, 1). Its design is weak, and the impressions are on light brown friable wax and very indistinct. The attendant saints of the previous seals are gone and their places taken by two shields of arms one at each side on the tracery. The dexter bears the arms of St. Oswald, used for the see, (azure) a cross (gold) between four lions rampant (silver); the sinister bears the bishop's arms, (silver) three boars' heads rased and erect (sable) in an engrailed border (sable). On the reverse the horse gallops to the dexter, the first to do so since Hatfield's. It is covered by voluminous flowing trappings emblazoned, as also is the shield the bishop carries, with a chevron between three lions rampant.[1] His right hand holds the reins, his left grasps the handle of his sheathed dagger. His crest is a bush of feathers rising from a mitre above his coronetted helm. The field is diapered with foliage and flowers. William Dudley copies, with some minor alterations, the seal of Robert Neville; the name and armorials of course differ (pl. VI, 2). He displays his quartered shield on both sides, namely I and IV (gold) two lions passant (azure), II

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[1] The same shield as that on the dexter of Bishop Neville's 'ad causas' seal (see note 2, p. 14).
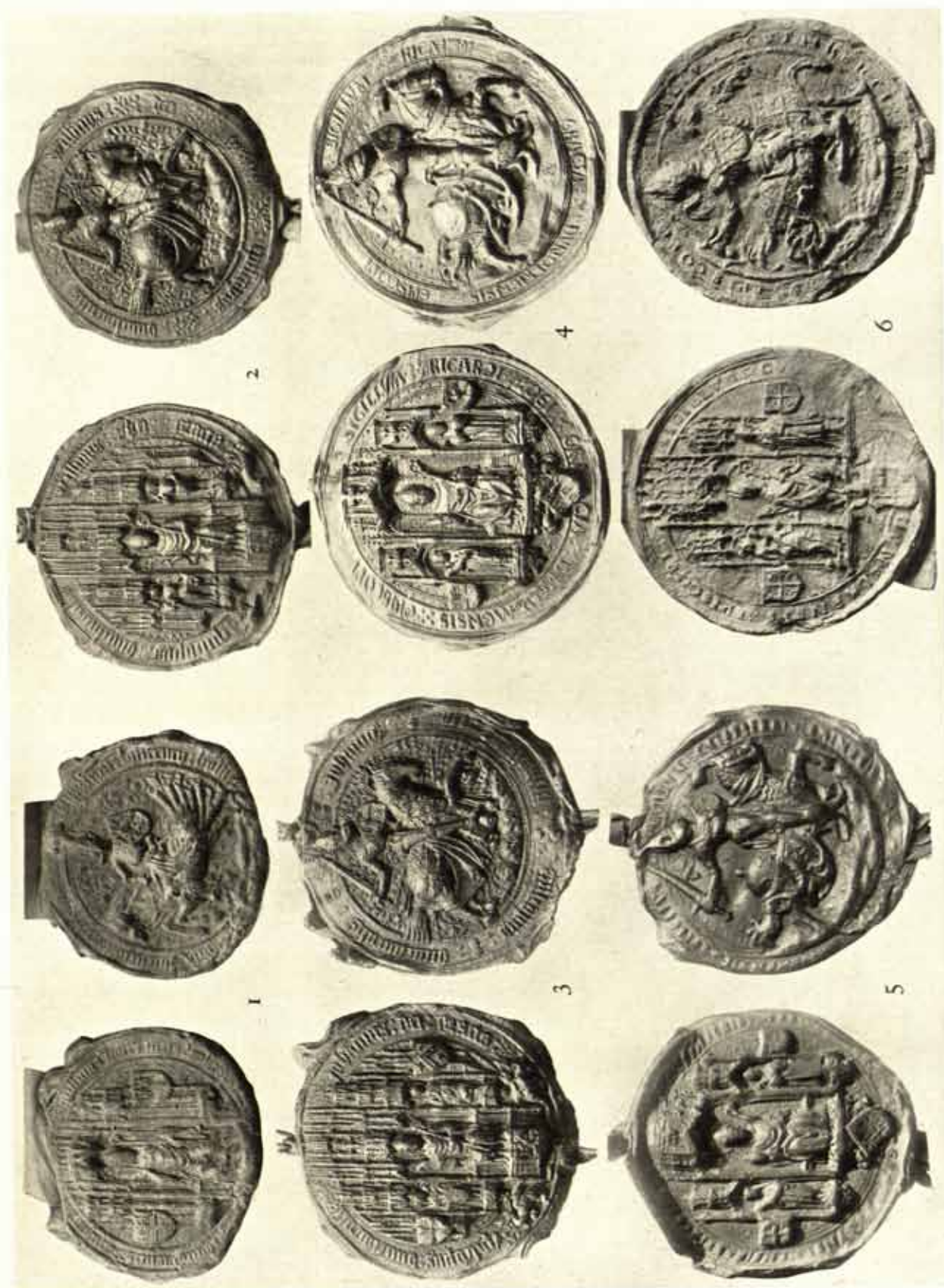
BISHOPS OF DURHAM: GREAT SEALS IN CHANCERY (c. 1-2)

1. Laurence Booth; 2. William Dudley; 3. John Sherwood; 4. Richard Fox; 5. Christopher Bainbridge; 6. Cuthbert Tunstall

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and III (silver) a cross patonce (azure). His crest is a hound's head rising from
between a mitre's horns. John Sherwood's seal follows, in general motive,
his predecessors with some important modifications (pl. VI, 3). He places
our Lady robed and crowned with the child Christ in a niche on his dexter; in
a sinister niche stands St. Catherine. He also uses two dragons as his throne's
supporters instead of the crouching lions of Neville and Dudley; this alteration
was probably made out of compliment to Henry VII, who used the dragon of
Wales as one of his shield supporters. The disposition of the shields of arms
is also different. Beneath the throne in front is his quartered shield, I and IV
a cross patonce, II and III on a chevron between three cinquefoils, a fleur-de-
lis. This is broken up into two single shields, the cross patonce being placed
on the dexter beyond our Lady, the chevron and cinquefoils on the sinister
beyond St. Catherine. The reverse follows very closely the design of Neville's
and Dudley's, the armorials only being altered. His crest is very indistinct, but
may again be a bush of feathers. Richard Fox and Christopher Bainbridge
(there is no example for William Senhouse, who came between them) each use
the same design on both obverse and reverse, altering only the names and
armorials (pl. VI, 4, 5). The legends, which are of a beautiful type of Renaissance
capitals and the delicate cusping around the inner border, are noteworthy features
of both. The ornament on the obverse is of a debased style of Gothic mixed with
classical motives. The figures are dull and heavy, quite lacking in the grace of
earlier examples. In a central niche is a seated figure of the bishop flanked on
the dexter by our Lady and Christ, on the sinister by St. Cuthbert. Beyond
our Lady, Fox displays the shield of the see, beyond St. Cuthbert his own
shield, (azure) a pelican 'in her piety' (gold). Beneath the throne is a Gothic-
shaped shield, the see impaling Fox.[2] Bainbridge treats the armorials in the
same way, except that he uses his own shield on the sinister, namely I and IV
(azure) two battle-axes paleways (silver) on a chief (gold) two pierced molets
(gules), II and III a squirrel,[3] the shield in base bearing the see impaled with
these arms. The reverse shows the lord palatine cased from head to heel in
full armour of plate. He wields a heavy sword with cross quillons and a long
hilt. A small shield of arms hangs by its strap round his neck. By this time,
and indeed earlier, shields had ceased to be needed for defence, they were used
only to display armorials. The horse is strong and ponderous, as it had to be

[1] The blazon of this shield is unknown. He was buried in the English college at Rome, and on
his tomb were the arms a chevron, charged with a cross crosslet, between three stars, a chief charged
with a mitre (*Ecclesiastical Heraldry*, p. 97).

[2] This is the first example, on the seals of the bishops of Durham, of impaling the shield of the
see with the bishop's own shield.

[3] The blazon of this quarter is unknown.

to carry such a mass of iron. It wears a plume of feathers for crest, its head and neck are plated, and its body covered with a heavy caparison ; this, like the shield, is blazoned with the arms as on the obverse impaled. The helm is coronetted and with a mitre, from which rises a puny plume of feathers as crest, very different from the noble bush that rises from the mitres of the earlier seals. The embroidered *infulae* of the mitre are seen floating behind the helm. Bainbridge slightly varies the arms on his horse. The fore-part is charged with his own quartered shield, the hind-part bears the arms of the bishopric. There are no known impressions of this type for Thomas Ruthall or for Thomas Wolsey. The last in the treasury is that of Cuthbert Tunstall (pl. VI, 6) ; of it little can be said and nothing good. The general design is the same as the two last, but the work is poor and jejune in the extreme. Its only point of interest is that on the sinister of the obverse is a shield bearing the arms of the priory usually called St. Cuthbert's, (azure) a cross flory (or patonce) (gold) between four lions rampant (silver). In base this shield, instead of the plain cross, is impaled with Tunstall's own shield of (sable) three combs (silver).

This completes the list of seals of the bishops of Durham preserved in the treasury of the dean and chapter. There remain, however, a few, not episcopal but connected with the bishopric, of which a brief account should be given. First in date and importance is the seal of Antony Bek as patriarch of Jerusalem, a titular dignity he received, according to the gossip of the time, 'because the bishop was rich and the pope poor' (pl. VII, 1). It is a noble seal in red wax 110 mm. in diameter. It has already been fully described in the *Proceedings* of the Society (vol. xi, 304), so that more need not be said of it here. There are also two very interesting seals used by the guardian of the temporalities, appointed by the king, during two vacancies of the see.[1] The first was used

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[1] The earliest mention of a royal seal for the bishopric of Durham 'sede vacante', I know of, is 5 May 1340. Amongst the records, jewels, etc. then delivered to Robert Sadington, the newly-appointed treasurer of the exchequer, was, in a leather bag, 'unum sigillum ordinatum pro brevibus sigillandis in episcopatu Dunolmensi sede vacante' (*The Ancient Kalendars and Inventories of His Majesty's Exchequer*, ii, 205). This seal must therefore have been used either during the vacancy following upon Bishop Beaumont's death (26 Sept.—19 Dec. 1333) or during that after the death of Bishop Kellawe (10 Oct. 1316—25 Mar. 1318). For the vacancy (15 Apr.—July 1345) after Bishop Bury's death John Marten, king's clerk, was appointed chancellor with the custody of the king's seal, deputed for that office during the voidance of the see (*Cal. Pat. Rolls*, 1343–1345, 462). The seal was returned to the treasury 12 July 1345 (*Ancient Kalendars and Inventories*, i, 158). Amongst the articles in the inventory, made upon the appointment of John bishop of Rochester as treasurer (28 Nov. 1356), there was, in the treasury in the cloister of Westminster Abbey, ' le seal que estoit ordeine pur l'office de la Chauncellrie el Veschie de Duresme en temps de voideantz de mesme l'Eveschie' (*ibid.*, iii, 223). For the vacancy (9 May 1381—5 Jan. 1382) following Bishop Hatfield's death the great seal, deputed for the office of chancellor of Durham 'sede vacante', was issued 10 July 1381 to John Fairfax for Hugh Westwick. It was returned by the same under the seal of Hugh Westwick 20 Feb. 1382, and replaced in the chest where the king's crowns were kept (*ibid.*, i, 158). Also after Skirlaw's death, the
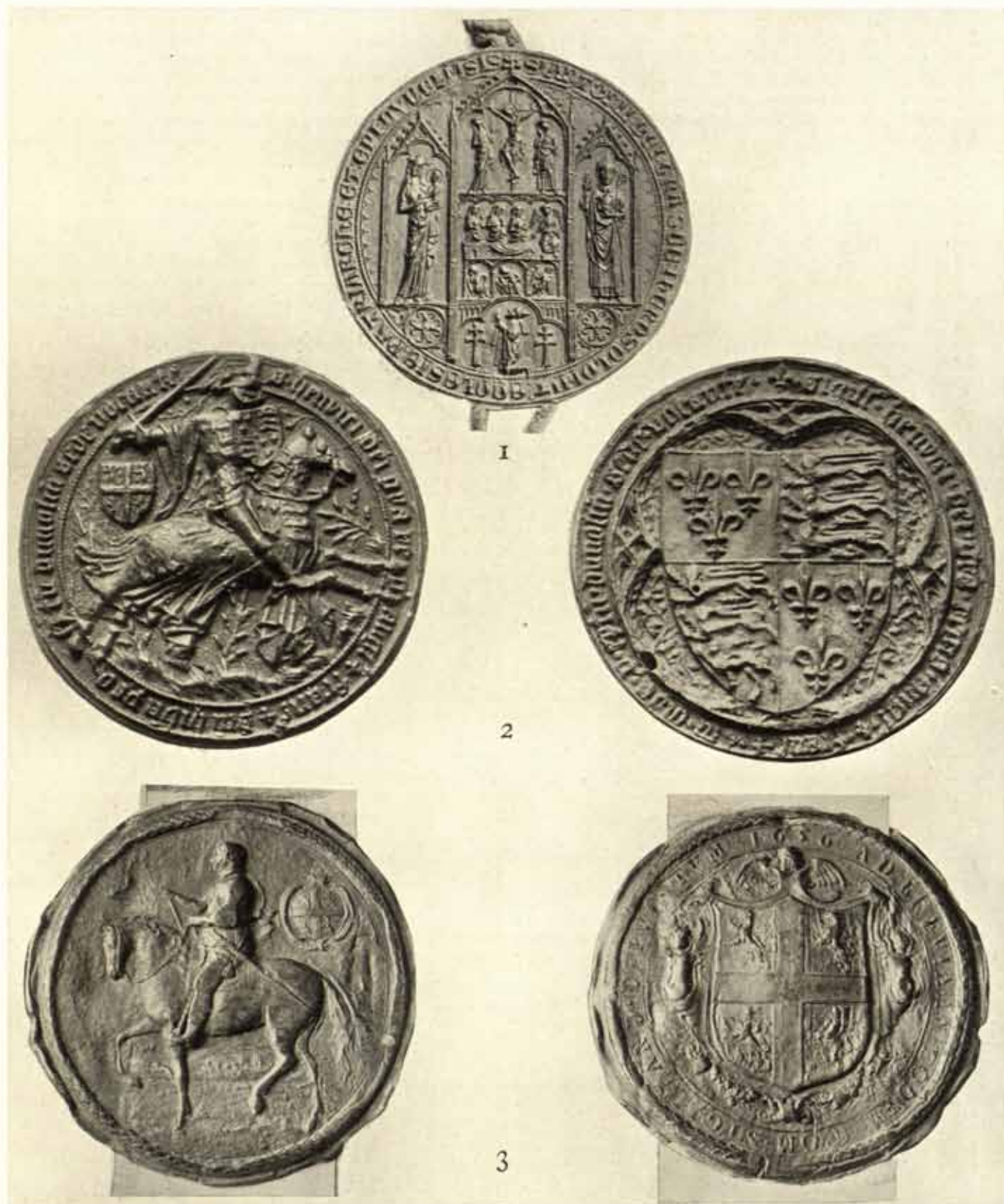
BISHOPS OF DURHAM: MISCELLANEOUS SEALS

1. Anthony Bek, as patriarch of Jerusalem, (c.2-3); 2. Guardian of temporalities, sede vacante, 1437-38, (1-1);
3. Guardian of temporalities, temp. Commonwealth, (2-3)

between the death of Langley, Nov. 1437, and the accession of Neville, April 1438 (pl. VII, 2). It is a round seal 70 mm. in diameter. The obverse bears a finely proportioned shield of the royal arms, I and IV France, II and III England, set in a cusped quatrefoil with a diaper of foliage. The legend, which is in black letter, begins with a fleur-de-lis:

sigill×henrici×Dei×gra×regis×angl×ɪ franc×ɪ×Dni×hibn××p×eptu×Dunolm×seDe×vocante. [*sic*]

The reverse is equestrian and differs from all the great seals of Henry VI. It represents a young graceful figure in armorial surcoat with long loose sleeves; his legs are in armour of plate, his visored helm is surmounted by a cap of estate, on which is the royal crest. He wields a long sword and bears on his left arm an armorial shield. His surcoat, shield, and horse-trappings are emblazoned with the royal arms. Behind him, in the field above the horse, is a shield of the bishopric, (azure) a cross (gold) between four lions rampant (silver).[1] The field is diapered with foliage and the legend is the same as on the obverse.

The second seal is that used by Edward IV for the years during which Bishop Booth was deprived of his temporalities because of his Lancastrian sympathies, that is from Dec. 1462 until April 1464. In these years the king kept the temporalities in his own hands and appointed the officers of the palatinate.[2] The seal is appended to a deed dated in the first year of the episcopate of John Sherwood (A. D. 1484), who explains that he uses it because 'sigillum nostrum magnum nondum habemus ad hoc factum sigillum Dni. Edwardi quarti regis Angliae in cancellaria nostra Dunelm ex antiquo remanens presentibus apposuimus'. It is round, 80 mm. in diameter. The obverse is equestrian and shows Edward as he appears on his second great seal. The legend, which is in black letter, reads

×Edwardus×Dei×gracia×rer×anglie×ɪ×francie×Dominus×hibernie.

On the reverse a bishop is enthroned and vested. A man-at-arms stands at his right hand, on his left St. George. Beneath the centre is the shield of arms of the see. The legend reads

sigillum×epatus×Dunelm×seDe×eiusDem×vacante××.

see being vacant from 25 Mar. to 8 Aug. 1406, it is recorded that on 12 May 1406 there was issued a certain seal, with two foils ('cum duobus foliis'), kept in a sealed bag of white leather, used for the office of chancellor in the lordship (i. e. the liberties of the bishopric) of Durham 'sede vacante' (*ibid.*, ii, 73).

[1] Showing that by this date the arms attributed to St. Oswald formed the recognized shield of the see.

[2] 'Mem. that on the 16th day of July in the 5th year of King Edw. IV there were delivered at the receipt of the exchequer by the hand of Richard Symson, clerk for the custody of the foils of the tallies of the exchequer, two seals of the bishopric of Durham, to be placed and kept in the king's treasury, which are laid in a little canvas bag sealed with the seal of Hugh Fenne, clerk of the treasury, in the chest where parchment is wont to be put' (*Ancient Kalendars and Inventories*, iii, p. 4).

The last example of this type is that of Oliver Cromwell (pl. VII, 3). It is called in the document to which it is appended 'the seale of our County Palatine of Durham appointed to seal writs in the same county'. It is there used, in A.D. 1658, by his son and successor Richard Cromwell. It is round, 100 mm. in diameter; the motive both on obverse and reverse is that of the Protector's great seals, and it is obviously engraved by the same hand, that of the famous engraver, Thomas Simon. The obverse bears a splendid shield charged with the arms of the bishopric, above it is a cherub with outspread wings, on either side seraphs with upraised wings. The date, 1656, is above on the line of the legend which, in Renaissance capitals, reads—

AD·BREVIA·IN·EODEM·COM·SIGILLAND·DEPUTATUM.

The fine equestrian figure of the great Protector on the reverse is the same, only smaller, as that on his second great seal. Behind and above the horse is a cartouche containing the arms of the bishopric. There is no legend.

In this review the official seals used by certain spiritual and temporal officers of the bishop should not be omitted. That of the Officialty is pointed oval measuring about 50 mm. by 33 mm.; there are three examples of it of different dates. The first is early thirteenth century (pl. VIII, 4). It represents the bishop seated on a bench whose ends are formed of the head and forelegs of a dog. Beneath him a robed and tonsured figure kneels, holding up by both hands a vesica-shaped object. The legend is in Lombardics:

✠ S'OFFICIALITATIS : DVNOLMENSIS : ECCE.

The second dates from late in the same century (pl. VIII, 5). It depicts the Annunciation, the official praying beneath, with the severe simplicity, strength of drawing and beauty of the best art of that time. The legend is in the fine type of Lombardic:

✠ SIGILLVM : OFFICIALITATIS : DVNOLMIE.

The third, of early fifteenth-century date, has the same motive treated less conventionally and with more ornament; it sadly lacks the vigour of the earlier presentment (pl. VIII, 6). The legend is in black letter. There is a special seal for the Officialty of the liberty of St. Cuthbert in the diocese of York and another for the same in Northumberland. They both represent St. Cuthbert with the official praying in base. The legend of each states the purpose for which it was used. The vicar-general of the bishop is represented by two seals like in size and shape to those of the Officialty. The first is of mid-fourteenth-century date; it shows St. Cuthbert and St. Oswald in niches with our Lady and Christ seated above them and the vicar-general praying beneath. The legend is in Lombardics:

✠ S'VICARII · GENERALIS · EPI · DVNELMENSIS.
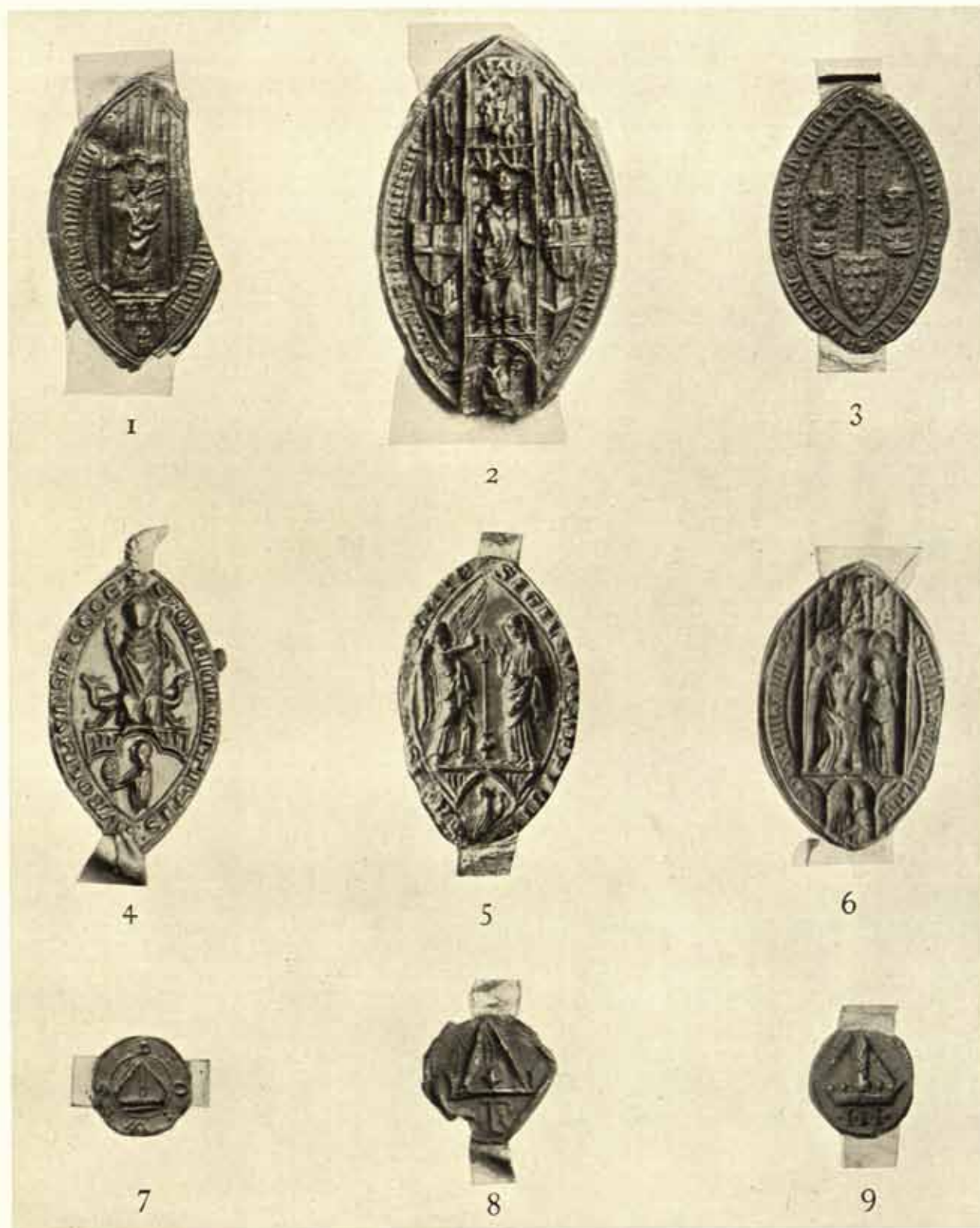
BISHOPS OF DURHAM: MISCELLANEOUS SEALS (1-1)

1. Sequestrator, temp. bishop Booth; 2. Vicar General, mid. 15th century; 3. Vicar General, sede vacante, c. 1345;
4. Officialty, early 13th century; 5. Officialty, late 13th century; 6. Officialty, early 15th century; 7. Adam of Bowes,
sheriff, 1313; 8. Robert Laton, sheriff, 1385-86; 9. John Menville, sheriff, 1339.

The second, dating about a century later, represents St. Cuthbert seated in a central niche; above him our Lady with Christ, beneath him a demi-figure of the bishop. On each side upon the tracery is a shield of arms, the dexter a plain cross, the sinister that of the see (pl. VIII, 2). The legend is in black letter. With this type should also be named a very interesting seal of the vicariate 'sede vacante' (pl. VIII, 3). Of the same size and shape as its fellows, it depicts a cross, of the Latin style, with rounded ends, standing above a shield of arms charged with ten roundels in an engrailed border. On the dexter side is the head of St. Peter wearing the tiara, on the sinister the mitred head of St. Cuthbert. The legend, which is in Lombardic, reads:

✠ S'VICARIATVS DVNOLM · IN · SP'VALIBVS : SADA : VACANTA.

It is a loose seal and therefore not datable from the document to which it has been attached, but it was probably used during the vacancy April to August 1345. The armorials are those of Zouche differenced, and are the same as those on the dexter of the 'ad causas' seal of William la Zouche, archbishop of York (A. D. 1342-1352); they probably represent a cadet of the same family.

There are examples of four seals used by the bishop's sequestrators. They are pointed oval in shape, but smaller than those just described. They range in date from the early fifteenth to the early sixteenth centuries. They all depict St. Cuthbert, the later ones have shields of arms in base; one of Bishop Booth's time displays his armorials (pl. VIII, 1), another the shield of the monastery. The legends are in black letter and all use the same words:

sigillum:offic:sequestratoris:dunolmie.

There remains only to notice the shrievalty seals used by three sheriffs of the palatinate, which have fortunately been preserved. The first is used by Adam of Bowes, Bishop Kellawe's sheriff, A. D. 1313 (pl. VIII, 7). It is round, 16 mm. in diameter, and bears the device of a mitre with, I think it is quite clear, a coronet round its lower edge: the legend reads—B : O : W : S :. The second is that of John Menville, sheriff of Bishop Richard of Bury in A.D. 1339. It is attached to a document dated 2nd Feb. 1339–1340. The seal is round, of about 16 mm. diameter, and also depicts a coronetted mitre with the initials ·I·M· beneath it (pl. VIII, 9).[1] The third (pl. VIII, 8) is that used by Robert Laton, sheriff of Bishop Fordham, to a deed dated Feb. 1385–1386.[2] It also bears a coronetted mitre and has the letter R. beneath it. The use of the coronet surrounding the mitre on these official seals tends to strengthen the view that it was used as a symbol of the palatine rank of the bishops of Durham.

[1] Durham Treas. Misc. Charts, no. 7079.
[2] Greenwell Deeds D 75 (now in Public Library, Newcastle-upon-Tyne).

DISCUSSION.

Mr. BARRON thought the armorial chasubles a peculiar feature of the seals, and questioned whether such vestments were actually worn. Mr. Blair based his opinion on the mention of a red vestment embroidered with arms in an inventory ; but such evidence was not conclusive. Many familiar with textiles had come across complete vestments described as embroidered with arms, but sacred vestments would hardly be turned into tabards, though orphreys might be so embroidered. Even from representations on the seals it was possible to draw the wrong conclusion. For instance, the bishops palatine were often shown as knights on horseback, but the bishops of Durham were not all capable of taking the field. Armour appeared on their seals not to show they possessed a suit but to display their palatine dignity ; and armorial chasubles no doubt had their use on seals, but would never be worn at the altar, any more than the crested helmet would be worn in the field.

Mr. BELOE remarked that another Bek, who was a bishop of Norwich, was the first to introduce heraldry on his episcopal seal, in the form of a cross moline at the base.

Rev. E. E. DORLING remarked that on Richard Poore's privy seal our Lady was placed above and the bishop below. Such an arrangement would have been in order at Salisbury, and the idea was probably brought from there.

Mr. BLAIR, in replying, expressed his agreement with Mr. Barron's views. The dedication at Durham was to our Lady, St. Cuthbert, and St. Oswald, which would explain Poore's seal.

The PRESIDENT, in thanking the author for an interesting account of the seals, expressed his pleasure in seeing such a fine series of English origin. They were architecture in miniature and possessed a beautiful symbolism. If the arms had been cut to scale on the vestments they would have been barely visible, so the devices appeared out of proportion. It should be noted that the cords attaching the seals were of woven, not plaited, silk.

Note.—The illustrations are reproduced by kind permission of the Dean and Chapter of Durham.

II.—*Flint Implements of Special Interest.* By Reginald A. Smith, *Esq., F.S.A.*

In dealing with Stone Age industries it is a sound principle to judge by the mass from a single site, as exceptional forms may be purely accidental and differ in date from similar pieces found elsewhere. But this method does not justify the neglect of rare specimens, which may unexpectedly amplify or correct the impression gained by even the most careful study of a large and commonplace series. To emphasize the occasional value of exceptional products, several specimens for which special importance is claimed have been selected during the last few years, and the Society is indebted to their respective owners for putting them on exhibition when this paper was read. Some have since been generously presented to the British Museum.

The Eolithic question has been discussed for years, and though the founders of the faith have passed away, there are plenty of adherents to keep from oblivion what they claim to be the earliest human relics in existence, at any rate in England, where there are no Miocene beds to rival those of the Cantal. Clearly in this case the argument from numbers has proved inconclusive: in fact, the abundance of specimens has been seized as a weapon by the opponents of the theory, and all alike condemned because the mass failed to impress those who, perhaps unconsciously, judged by the palaeolithic standard. Both sides, however, would agree as to the characteristics of an eolith—the domed and crusted top, the flat and naturally fractured base, and the steep edge-flaking due to blows delivered round the under-face. The crucial point is whether man (or his predecessor) ever made an implement on these lines.

In examining for the National Museum of Wales some tons of flints collected by the late Mr. Stopes, of Swanscombe, it was my good fortune to come across, in a chest containing hundreds of ordinary eoliths, one specimen which seemed to fulfil all the eolithic conditions and at the same time to be evidently of human manufacture. Through the good offices of our Fellow Dr. Mortimer Wheeler this, with another flint to be described later, was sent to London, and is here illustrated by permission.

Fig. 1. The top (upper face) is convex and covered with a dull brown crust : the base is ochreous, with all the unevenness of a natural fracture, and the edge, except for the space of one inch, is chipped all round. Where flakes have been detached the colour is lighter and the surface lustrous ; but two adjoining flaked surfaces are still lighter and of a pearly tint, whether due to some inclusion of other material in the flint or to work at a later date is for our present purpose immaterial. It is marked 596 in the Stopes collection, and measures 4·7 in. by 2·6 in. It was found on the slope of the North Downs of Kent, about 490 ft. O. D. at Ash, 6 miles due south of Swanscombe.

The next exhibit has an important bearing on the demarcation or Palaeolithic Drift in England. Sir John Evans's line from the Bristol Channel to the
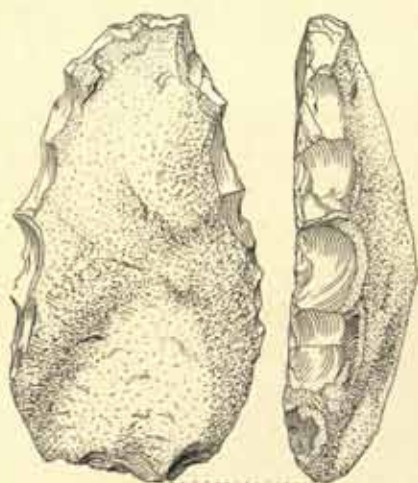
Fig. 1. Eolith from Ash, Kent : front and side views (½).
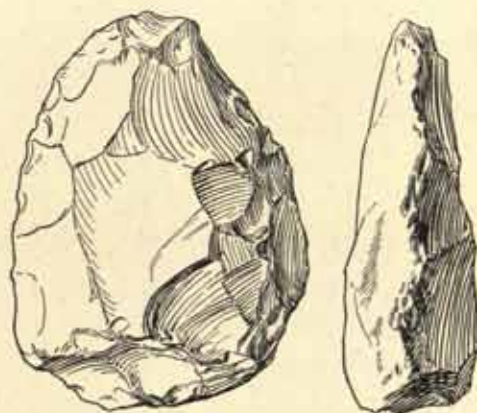
Fig. 2. Hand-axe, Henwick, Worcs. : front and side views (½).

Wash has served to mark the northern limit of implement-bearing gravels, though he himself recorded a quartzite specimen from the gravels of the Rea, at Saltley, Warwickshire, and mentioned a subtriangular flint in the late Mr. Boynton's collection, found on the surface at Huntow, near Bridlington. A small palaeolith recently presented to the British Museum by our Fellow Mr. Randall Davies is from gravel at Skellingthorpe near Lincoln, and a worked flake found locally is now at Chester ; but more important than the flakes from Yorkshire to be noticed below (p. 36) is the Worcestershire series kindly sent for inspection by the Curator of the Victoria Institute at Worcester. The only Geological Survey map is Sheet LIV, S.W. Worcester, on which the Drift is not indicated ; but the Severn gravels are now being investigated in the light of these finds by Dr. L. J. Wills, of Birmingham University. The subsoil of the whole district is red sandstone, so the gravel in which the implements were found late in 1920 must have come from a considerable distance. The specimens illustrated are :

Fig. 2. A well-made ovate with thick flat butt, deeply ochreous with lighter markings, rolled and pitted, with slightly zigzag sides and all the crust removed : from gravel-pit at Henwick, Worcester.   L. 4 in., B. 3 in.

Fig. 3. Pear-shaped implement, deeply ochreous with 'nose', and half of one face flat ; a trace of crust and larger patch of a still older ochreous surface, bruised ridges and rather rolled condition : from the Sewage Works, Earl's Court, near Worcester.   L. 2·8 in.

Fig. 4. Side-scraper of Le Moustier character, much of the original pebble surface on the front, pale ochreous edge with more recent chipping jet black ; a large bulb of percussion and net-marking on white or yellowish-grey ground : from the Nursery, St. John's, Worcester, L. 2·6 in.

Fig. 5. Yellow specimen resembling the point of a St. Acheul ovate, but probably a complete triangular implement, with one rather zigzag side and patch of buff crust curving to the base : from the bank of the Avon at Conderton, near Bredon, Worcs.

Fig. 3.   Hand-axe found near Worcester : back, side, and front views (½).   Fig. 4.   Flint side-scraper, front and side views (½).   Fig. 5.   Flint implement, Conderton, Worcs.: front and side views (½).

This last comes from a gravel three miles east of the Avon and five from its junction with the Severn. It is therefore nearer the Bristol Channel–Wash line, but serves as a connecting link between the Worcester group and the Gloucestershire find recorded in our *Journal* of July 1921, p. 234.

Finds in the Thames basin above the Goring gap have not received as much attention as deposits on the lower Thames, though many implements have been collected from gravel-pits at Ewelme and Benson (Bensington); and the sensational discovery at Wolvercote, 1½ miles north of Oxford, gave rise to some discussion 18 years ago (*Quart. Journ. Geol. Soc.*, lx (1904), 120–132; Sollas, *Ancient Hunters*, 2nd edition, 137). Two palaeoliths have been communicated by our Fellow Mr. H. G. W. d'Almaine (one recovered since this paper was read), having been recently found in a new site near the Abingdon boundary on the road to Radley, five miles south of Oxford (Berks. 6 in. Ordnance map, X, N.E., 1914, and Oxford sheet of the Geological Survey (1908), awaiting revision). The shallow gravel-pit is being worked for concrete bricks, the material consisting largely of current-bedded Jurassic pebbles, generally of small size, the whole section being very unlike the ordinary flint-gravel deposits of the Thames. It lies just under 1 mile north-east of Abingdon market-place, and over half

a mile from the nearest point of the Thames, which is here about 170 ft. O. D. The surface level is 199 ft. O. D. and this pit is therefore about 30 ft. above the river in what is known as the first or lowest terrace, on a foundation of Kimmeridge clay (T. I. Pocock, *Geology of Country round Oxford*).

Fig. 6 (from drawing kindly supplied by Mr. Octavius Wright). A comparatively thick implement of irregular ovate form, with one face nearly flat, the other domed; lustrous, with pale ochreous patina, fairly sharp edge all round, and sides nearly straight; recent chip showing white next the point.   L. 4·5 in.

Fig. 7. A bright yellow or pale ochreous hand-axe, almost ovate in plan, but thick in

Fig. 6.   Flint hand-axe, Abingdon : front and side views (½).

Fig. 7.   Front, back, and side of palaeolith, Abingdon (½).

the centre and one face nearly flat; cutting-edge all round, but battered in places; one side zigzag, the other nearly straight; the ridges just dulled, and one later chip showing grey : L. 3·9 in., 1·4 in. thick at centre.

A remarkable implement, of great chronological possibilities, exhibited by Mr. Llewellyn Treacher, F.G.S., has since been generously presented by him to the British Museum.

Fig. 8. Ovate implement mottled grey and black, with glossy patches, tapering to a long and very sharp point of a triangular section; one face almost flat, with crusted depressions and patch, the other regularly domed, with central ridge to the point; sharp edge all round except for lateral butt.   L. 8 in.

It came from a pit in Friar Park near Henley, at the lower end of a sheet of gravel which slopes eastward from 350 ft. O. D. near New Farm to about 230 ft. O. D. at Henley (Jukes-Browne and Osborne White, *Geology of Country around Henley-on-Thames, Explanation of Sheet 254*, Geological Survey, 1908, p. 88). The surface of the river is here about 100 ft. O. D., so that the deposit (whether

gravel or brick-earth) which contained this implement and had evidently con-
tained it ever since it was made, was at least 130 ft. above the river, and so
beyond even the 100 ft. terrace.   The condition of the implement shows that it
has never been rolled, nor exposed on the surface; hence it may be taken as
contemporary with the formation of the deposit; and as the type is distinct and
only referable to the period of La Micoque (transition between St. Acheul and
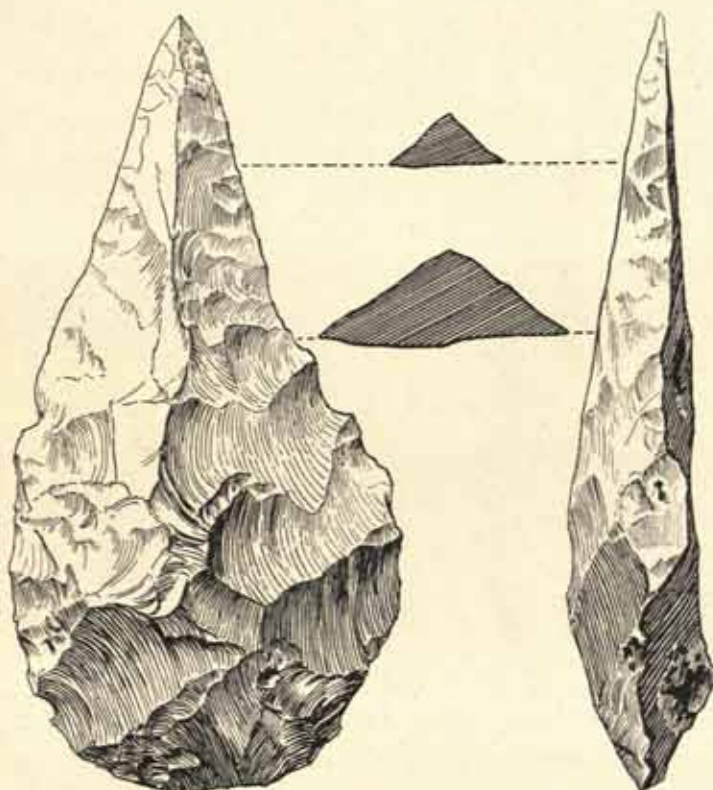
Fig. 8.   Pointed hand-axe with side view and sections, Henley-on-Thames ($\frac{1}{2}$).

Le Moustier) it helps to fix the date of this high level deposit, which must be
considerably later than the terrace-gravels lower down the slope.
        The discovery of a palaeolith in gravel on one of the summits of the Chiltern
Hills is, from the geological point of view, surprising, but there is no reason to
doubt that the implement exhibited by Mr. Day, of Beaconsfield, originally lay
in gravel at a level only a few feet below the top of the hill at Knotty Green,
$1\frac{1}{2}$ miles north of Beaconsfield, Bucks.   He was passing this spot, just below
Boar's Head Cottages and almost opposite the pathway to Penn, and noticed
the flint in a lump of gravel, just thrown out by workmen laying pipes along the
roadside.   The geological map (published in 1922) shows a patch of Tertiaries
on the top of this hill, which is about 450 ft. O. D. or approximately 80 ft. above

Beaconsfield, but the gravel must be Pleistocene.   Mr. Edge-Partington's kind
offices in this matter are gratefully acknowledged.

Fig. 9. Ovate hand-axe with basil point (*en biseau*) and sharp edge all round, wavy
and straight.   The ridges are just smoothed, and the colour cream to fawn, with a purplish
tint in places : one chip is almost chalky in appearance, and there is a large 'pot-lid'
fracture on one face.   Probably of mid St. Acheul date.   L. 6·3 in., and 1·6 in. thick.

The surface condition of this implement shows that it has travelled, pre-
sumably from still higher levels of the Chiltern range across what are now dry
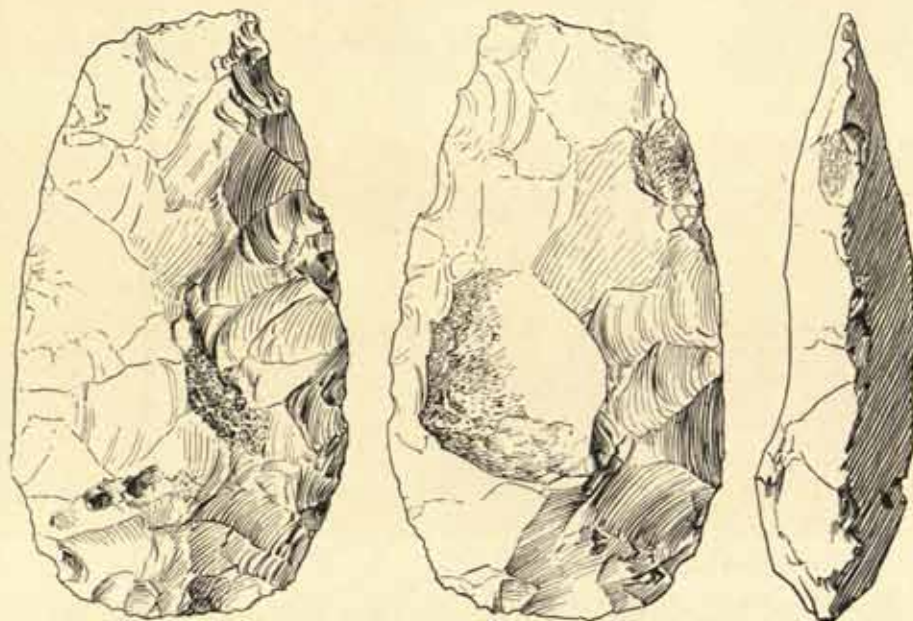
Fig. 9.   Ovate hand-axe, Beaconsfield : front, back, and side views (½).

valleys in the chalk ; and is therefore not so useful for chronological purposes
as the unrolled implement from Henley just described. But it at least gives one
limit of date for the deposition of the gravel, which cannot be earlier than about
the middle of the later Drift, called after St. Acheul.   There are still later
specimens of the St. Acheul type, often small, twisted, and deeply ochreous,
which have been found on high ground far away from the existing rivers ; and
even if there were not abundant French evidence on the point (*Proc. Prehist.
Soc. E. Anglia*, ii, 397, and finds in the upper Thames basin, *ibid.*, p. 99), the
accumulation of instances in southern England points to a wholesale deposit
of gravel and brick-earth on the plateaus in the period of Le Moustier, coincident
with one of the major glaciations.

The Knotty Green hand-axe seems to be the only one on record from the
neighbourhood, but it is by no means an isolated find on the lower slopes of the

Chilterns. The late Mr. Worthington Smith's results from various pits between Round Green, near Luton, and Gaddesden Row, above the river Gade, have already been recorded in *Archaeologia*, lxvii, 49, and *Proceedings*, xxxi, 40 ; but there are corresponding finds to the south-west, some of which have been described by Dr. A. E. Peake (*Proc. Prehist. Soc. E. Anglia*, ii, p. 578). Taken as a link in a long chain of evidence, the new discovery raises fresh hopes of finding more datable specimens in the 'plateau' gravel which has, on geological grounds, been so long neglected. The term is now rather discredited in favour
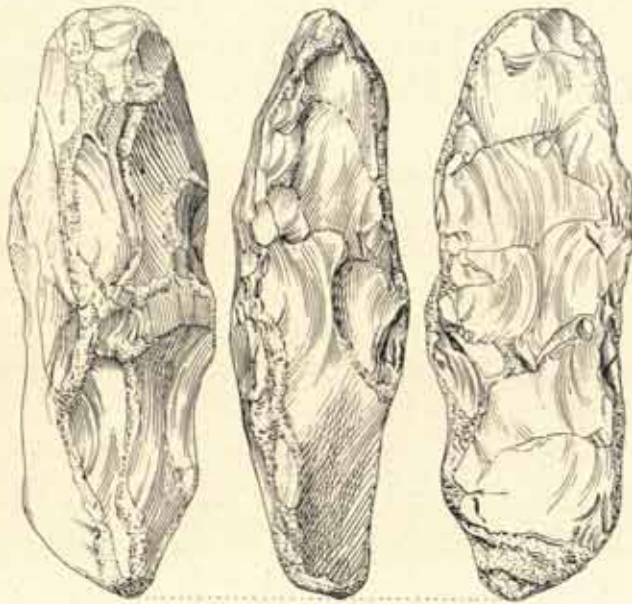
Fig. 10. Flint implement, Netley : front, side, and back views (½).

of 'high level' gravels, but is certainly convenient and would not be misleading if it did not generally imply (for no sufficient reason) that such deposits preceded the formation of the present river-system. The more St. Acheul implements are found in such deposits, the less will students be content to refer these spreads to marine action in the Pliocene.

The next exhibit (fig. 10) seems at first sight to be a neolithic implement in palaeolithic garb : the form is that of a rough or rudimentary 'Thames pick', and the patina and surface condition are indistinguishable from a large series of undoubted palaeoliths from Hill Head on Southampton Water. Something therefore has to give way, and it is certainly easier to imagine the form palaeolithic than the patina neolithic. In view of the hundreds of ovate and other hand-axes from the same gravel spread (there are dozens in the British Museum alone), it would be rash to overrule the evidence of patination ; and the consequences of such a verdict are of considerable importance.

The implement in question was found during the war by the late Captain Harvey Webb, while searching the coastal gravel near Netley Hospital, where he was stationed. It belongs to and was lent by his widow, now Mrs. James Young, and may be described as follows:

Fig. 10. A flint rod of roughly triangular section, with one face chipped flat; one end is nosed with bold fluting, the other is crusted and therefore not functional. The whole is patinated an ochreous colour and the ridges are much battered by rolling. L. 6 in., the flat face 2 in. across.

It was submitted to the British Museum in November 1916 with other (obviously palaeolithic) specimens from the same deposits: a large pear-shaped hand-axe with brown patina; a white St. Acheul ovate much rolled; a cordate brown St. Acheul implement, unrolled; a pointed triangular hand-axe; and a brown chert ovate, this last being from the top of the loam beneath the gravel.

The figured specimen has been already mentioned in *Proceedings*, xxx, 29, where the opportunity was taken to record the discovery of several 'Thames picks' in various gravels; and in 1914 the view was put forward that the patches still existing between the northern edge of the New Forest, Bournemouth to the south-west and Southampton to the south-east, were remnants of a great sheet that once extended over the whole area and filled up the shallow valleys of the period: the gravels of Southampton Water belong to this sheet (*Proc. Geologists' Assoc.*, xxvi, 10; *Proc. Prehist. Soc. E. Anglia*, ii, 406). Our Fellow Mr. Dale has drawn attention to deeply stained polished celts alleged to come from gravel deposits at Dunbridge (north of Romsey) and Lee-on-the-Solent (*Proceedings*, xxx, 22, and xv, 73); but there is no danger of confusing Capt. Harvey Webb's find with even the deepest-stained neolith, as the identity of patina with the Hill Head series is undeniable. Mr. Reginald Hooley has recently published a pick-like flint, 7¼ in. long, found by himself below 2 ft. of brick-earth near Chilton Chine, I.W. (*Proc. Hants. Field Club*, ix, 169).

In the Geological Survey memoir (1902), the deposit on Beaulieu Heath is described as palaeolithic gravel (p. 46), but the Netley gravel is called a river terrace, and on the Drift map of 1904 appears a thin strip along the eastern shore of Southampton Water which is distinguished (as being on a lower shelf) from the 'plateau' deposit adjoining. It is to this terrace gravel that the implements would presumably be referred, and it has long been questioned whether the Hill Head series were abraded by modern sea action after falling from the gravel cliff to the beach, or were reduced to their present condition before coming to rest in the gravel. The latter seems the more likely hypothesis and could be easily settled by a diligent hunt for specimens *in situ*. No one

would deny their association with the gravel, whether of the 'plateau' or terrace variety; and a strong argument against their belonging exclusively to the fluviatile strip marked on the geological map is that several have been found farther inland near Crofton, south-east of Titchfield (collection of Mr. C. F. Newington).

The specimen is not a typical 'Thames pick' either in form or surface condition, but is more like that than any recognized type; and may be usefully compared with a slug-shaped specimen of deep brown colour presented to the national collection by Dr. T. G. Longstaff, who was satisfied that it came from gravel 6 ft. from the surface, close to the underlying sand between Pokesdown and Boscombe stations, east of Bournemouth and over 100 ft. above the sea. In spite of the different elevation, this gravel seems to belong to the same great spread as that along Southampton Water, and the parallel is therefore almost complete. The form is, however, excessively rare, and may be allied to a find *in situ* at Swanscombe figured in *Archaeologia*, lxiv, 190 (length 5.4 in.).

The data at present available may appear inadequate, and no rigid conclusion can be drawn here; but it may be remarked that the Netley flint is almost certainly older than the normal 'Thames pick', which has been found more than once in gravel and even in association with a mammoth tusk (between Aldershot and Farnham; *Proceedings*, xxx, 30). If the latter type is palaeolithic, then the Netley implement may be taken at its face value, and classed with the St. Acheul ovates of Hill Head; and further, the gravels assigned, on the strength of the latest included type, to late St. Acheul times must not be considered the latest gravels of the Pleistocene in England. The important glaciation which all authorities connect with the period of Le Moustier evidently resulted in the deposition or rearrangement of extensive gravel beds; and archaeological evidence of the fact is continually increasing in volume. It now seems probable that the Chalky Boulder-clay itself dates from this period (*Proc. Prehist. Soc. E. Anglia*, iii, 364).

In some respects analogous is the curious implement from Saxmundham exhibited and subsequently added to the national collection by Mrs. E. M. Rigg. It was picked up from the surface on Kelsale Hall Farm, about ½ mile north-west of Kelsale and 19 miles north-east of Ipswich, at an elevation of 100 ft. O. D.

Fig. 11. Elongated implement with section between a triangle and lozenge, cutting-edge all round except on the thick butt, which retains the original pebbled surface and curves to the right; about 2½ in. from butt the sides are notched to form a waist and are elsewhere zigzag; dark ochreous patina, pinkish in places, the crust lighter. L. 6.9 in.

Such an implement is hard to classify: its form is unfamiliar from the Drift (that is, the terrace-gravels of Chelles and St. Acheul date), and its patina

not only implies great antiquity but connects it with the indeterminate 'plateau' series, which often has a pinkish glow in addition to the ochreous colouring. This phenomenon has been touched upon elsewhere (*Proc. Prehist. Soc. E. Anglia*, ii, 404 ; *Proc. Geol. Assoc.*, xxxii, 15), but neither its cause nor its significance has yet been determined.   If this type of patina alone (it being hopeless to include all varieties) could be accepted as proof not only of great age but of production during a certain period, there would be no hesitation in putting it into a class by itself and waiting for other examples to be noticed here or elsewhere;
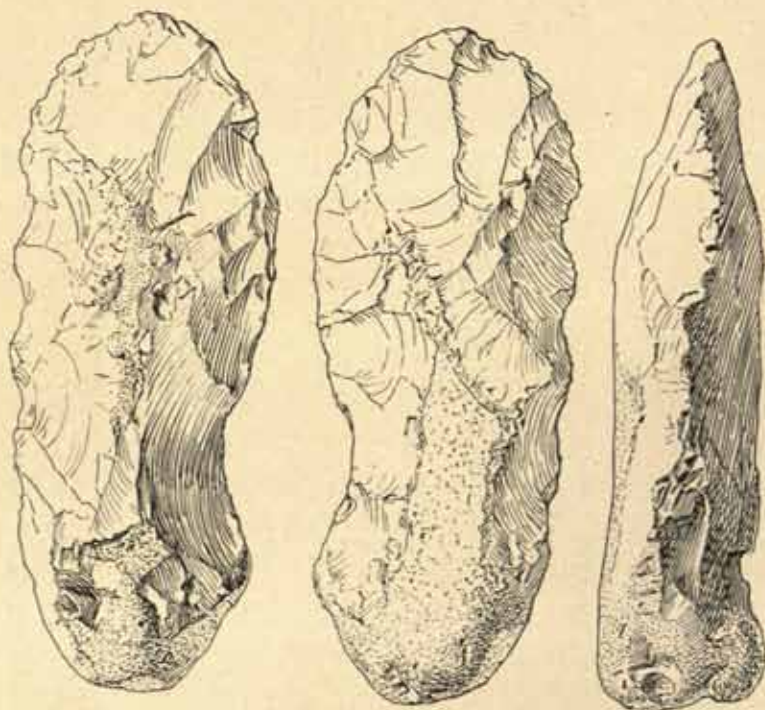
Fig. 11.   Flint implement, Kelsale, Suffolk : front, back, and side views (½).

but the only parallel at hand is a grey rod-like implement, resembling a 'pick' but with certain peculiarities, now in the Natural History Museum, and this again is of uncertain age.   It is $9\frac{3}{4}$ in. long with a maximum breadth of $2\frac{1}{2}$ in. and a section passing from a triangle near the butt to a lozenge at the broadest part : both faces have bold transverse flaking, and the under-face is chipped nearly flat, the broad point being a cutting-edge in the central line. The implement is thickest (2 in.) near the waist (3 in. from the butt), where the side-edges are slightly hollowed by battering, the butt end being curved in plan and the other shaped into a 'nose' by rough fluting from below.   There are a few iron stains upon it and all that is known of its history is that, according to Mr. Spurrell's label, it was found at Swanscombe near the pit below tide-mark in 1895 (E 268).   Found at such a low level, it cannot well belong to the classic

series of Swanscombe, and if any connexion with the Northfleet industry is ruled out, it would be relegated by most collectors to the obscure period called neolithic, where no complete classification has yet been found possible.

But some connexion, however slight, is indicated between this Swanscombe flint and that from Saxmundham, which is strengthened to some extent by the Boscombe specimen alluded to above (p. 33). Such forms are rare enough in any stratum and in any locality: is it probable that each one in such a small series belongs to a different period? Ochreous patina is all in favour of great
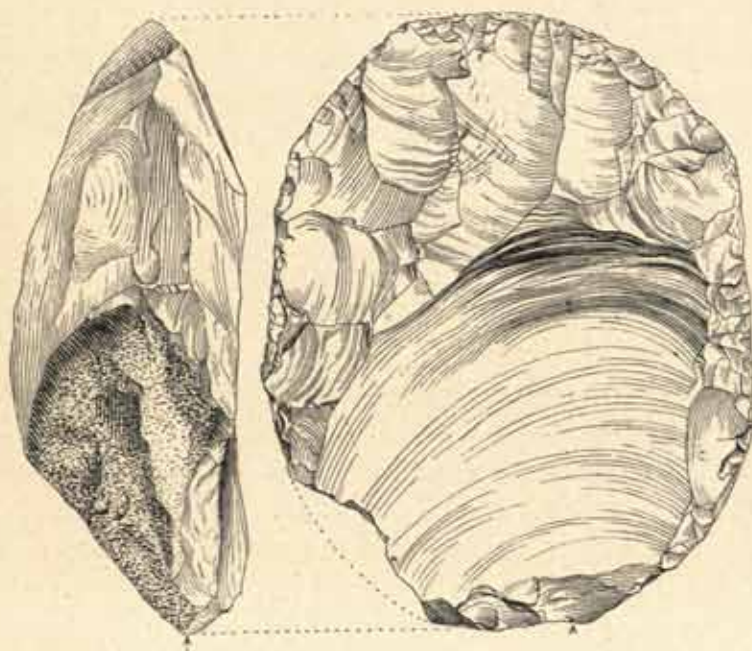
Fig. 12. Tortoise core, Swanscombe: side and front views (½).

antiquity: the absence of patina or staining may be an accident and is certainly not a proof of recent origin.

The Northfleet industry described in *Archaeologia*, lxii (ii), 515, is now well known, and acknowledged to date from the period of Le Moustier, though whether from its early or latest stage is at present uncertain. The tortoise-core, which is one of its leading features, has been collected in large numbers and is represented in many museums; hence there would be no need to include a specimen here had it not been a striking object-lesson in technique. This, too, was particularly noticed during the examination and arrangement of the Stopes collection at Cardiff, and has been kindly lent from the National Museum of Wales. It was probably in Mr. Stopes's possession when he wrote his paper on the site in 1883 (*Journ. Anthrop. Inst.*, xiii, 109).

Fig. 12. Flint core of tortoise-type, with regular oval outline except for a notch near

(and later than) the faceted edge which formed the butt of the flake-implement to be detached.   About half the conical or under-face is crusted from the apex, and the rest of the core is marbled in various shades of yellow, brown, and grey ; the upper face finely domed over half its area, the rest having been detached in an unsuccessful attempt to make a flake-implement of Levallois type : from Swanscombe, Kent (Stopes collection, no. 26).   L. 6·4 in., B. 5 in.

Except for the unfortunate final blow, the specimen is a masterpiece ; and the failure to detach a complete ovate flake implement renders it all the more useful as an illustration of method.   The student is left to wonder as much at the workman's skill as at his nonchalance in discarding without more ado a serviceable mass of flint on which he had lavished such dexterity.

It has already been mentioned (p. 30) that the deposition of Drift did not cease at the close of the period named after St. Acheul, a fact that has been recognized abroad for some years past.   Many foreign authors treat the period of Le Moustier as the last stage of the Drift or terrace-gravel period, not as the opening stage of the palaeolithic Cave period ; and the number of flake-implements or worked flakes of that culture found in English geological deposits increases year by year.   Such discoveries at Ealing or at Farnham are, however, less surprising than those from glacial deposits in Suffolk (as collected and described by Mr. Reid Moir in *Journ. R. Anthrop. Inst.*, l (1920), 135), and still farther north in Leicestershire and Yorkshire.

Thus Mr. A. J. Pickering, of Hinckley, reported in 1917 the discovery *in situ* of a dull horny flake measuring 2 in. by 1·6 in., at 5 ft. from the surface in the Chalky Boulder gravel of Sapcote pit, near Hinckley, Leics.

A similar flake was found by Mr. F. J. Epps in 3 ft. of glacial loam (as mapped in Geol. Survey 1 in. map, N.S. sheet 142) at 200 ft. O. D., $\frac{1}{2}$ mile east of Barrow-on-Soar church in the same county.   It is a good Levallois flake with imperfect butt, signs of use, and a pinkish glow on one face, the other being yellow.

The glacial deposits of Yorkshire have been studied particularly by Prof. Kendall, of Leeds, who has published a map of the district in the *Proc. York. Geol. Soc.*, xv (1903), pl. vi.   The ice coming from Scotland by sea was forced up the dales of the North Riding, and the depth and extent of this invasion are marked to this day by morainic deposits on the slopes of the valleys and passes of the hills. It was in Boulder-clay on this level, about 400 ft. O. D. in the valley of the Esk, four miles south-west of Whitby, that the flake exhibited by Mr. Lewis G. Rowland was found.

Fig. 13. Flint flake resembling a Le Moustier 'point', unrolled and sharp, yellowish-brown with notch beside the point, and roughly faceted butt : both side-edges rather

steeply worked, and the upper face slightly scratched : found 4 ft. deep in cutting a drain through glacial clay on Newbiggin Farm.

Those familiar only with ' points ' from Le Moustier cave-deposits in France might hesitate to accept this as belonging to the same culture, without being able to attribute it to any other or to deny its human origin. But those who demand the same high standard in England are doomed to disappointment save in such exceptional localities as High Lodge, Mildenhall. Coarser but still recognizable work of the period has been found in abundance at Stoke Newington, Warren Hill, etc.

Two exhibits from the neighbourhood of Cissbury, Sussex, have no direct

Fig. 13. Flint 'point', near Whitby : front and side views (½).

Fig. 14. Ovate hand-axe, near Cissbury : front and side views (½).

Fig. 15. Carinated plane, Cissbury : side and end views (½).

bearing on the famous flint-mines, but have an interest of their own as evidence of a palaeolithic occupation of the district, which might have been denied before the discovery of several hand-axes in the river-gravels of West Sussex (*Proceedings*, xx, 197, and xxiii, 371). Some of these have a white patination, like that here illustrated from the collection of Mr. J. H. Pull.

Fig. 14. Ovate hand-axe, greyish white, with edge all round, fairly sharp, with glossy spots and some lines of iron-staining ; one side is twisted like a reversed S, the other less pronounced : found one mile from Cissbury. L. 3·4 in.

A similar implement was exhibited by Mr. Frank Lasham, who secured it with a Cissbury collection, but cannot be certain of its provenance. The implement is rather subtriangular than ovate, 3·6 in. long, with the reversed-S curve on both sides. Of pale ochreous colour, it has later chipping of a lighter shade, some glossy spots and iron stains on the ridges (not necessarily due to the plough, see *Proceedings*, xxiii, 385). Apart from the surface-tint, it is therefore almost a counterpart of the preceding, and both may be assigned to the Early Cave period, if not to the last stage of St. Acheul.

Another indication of palaeolithic occupation is the diminutive implement

from the surface at Cissbury exhibited by Mr. Buscall Fox, who has presented it and other select specimens to the British Museum.

Fig. 15. A dull white, roughly flaked, carinated plane, with smooth base formed by a single facet, and the rounded end undercut to sharpen a planing edge; at the opposite end a vertical ridge only, ending below in a point not intended for use. L. 2·2 in., H. 1·5 in.

The keeled plane (*grattoir caréné*) is in some respects analogous to what is known in England as a 'tea-cosy' or segmental tool; but the present specimen accords better than most with the continental pattern so commonly found in cave-deposits of Aurignac date. As it is one of the test pieces for horizon dating abroad, it is unlikely to belong to several periods, though there appears to be a recrudescence of it in La Madeleine times. As La Madeleine forms are conspicuously absent from the district, the wisest course is to take it at face-value and assign it to an Aurignac civilization on the South Downs, where Cave man would have found the conditions unfamiliar. Unless he dug holes in the chalk he would have had to lead an open-air life in rather an exposed position; but on this theory, the climate would have considerably improved after the cold spell of Le Moustier.

Another implement which would at first sight be attributed to the palaeolithic Cave period (and not its latest phase) is the graver belonging to Mr. Derek Richardson and illustrated here by his permission:

Fig. 16. Graving tool of sharp, grey flint, with a point 0·4 in. deep, on the right of which the edge is 'nibbled'; the left side of the point formed by the removal of a single slice by a blow at the point. L. 1·7 in.

It came with many other specimens of indeterminate facies from a shallow deposit on Walton Heath, Surrey, near the brink of the escarpment and 500-550 ft. O. D.; and has been pronounced a true *burin* by the Abbé Breuil, but of the neolithic period named after Le Campigny (near Blangy-sur-Bresle, Seine-inférieure). In contrast to their abundance on the Continent, gravers are unaccountably rare in England, but several have been recorded in recent years; for example, from Cornwall, the Essex coast, and the southern Pennine Hills, this last locality producing very small examples with round scrapers, etc., proving a local Tardenois industry. The date of the rest is naturally disputed; but if all or any are to be assigned to the full Neolithic (after the disappearance of the Tardenois 'pygmies'), it will be necessary to explain this survival of a type that is barely represented in the caves of England, though the commonest implement of the Cave-period abroad.

In the Late Neolithic or Megalithic period there seems to have been considerable intercourse between the inhabitants of countries bordering on the

North Sea (*Proc. Prehist. Soc. E. Anglia*, iii, 23, 25), but this was interrupted during the last two stages (those of the Passage-graves and Cist-burials). The thick-butted celt was never an indigenous type here, and it is only in recent years that a few have been collected from our soil, which were evidently imported from Scandinavia in what was our Early Bronze Age. A few stumps of flint-daggers, one or two other stone implements, and a group of potsherds have been
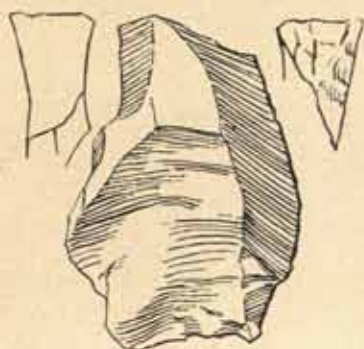
Fig. 16. Flint graver, Walton Heath, with side views of point (⅓).
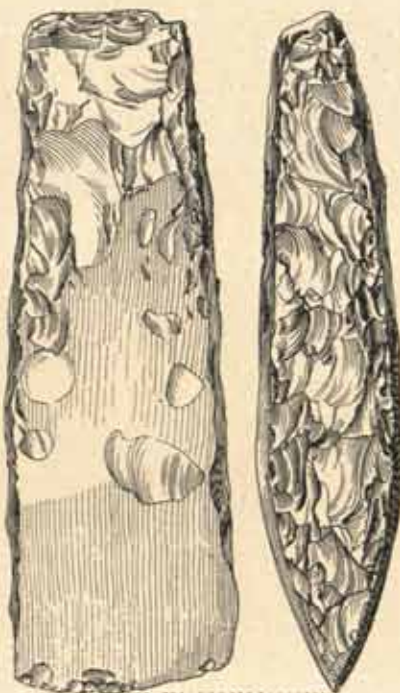
Fig. 17. Flint celt, near Cambridge : front and side views (½).

Fig. 18. Flint celt, Thames at Twickenham : front and side views (½).

placed on record in this connexion; and two Scandinavian thick-butted celts found in Britain are here illustrated for the first time.

Fig. 17. A massive, dark brown flint celt, of oblong section near the butt, square in the middle, polished on the lower half of both faces, and glossy in places: found in the Thames at York House, Twickenham, and exhibited by Mr. A. C. Meek. L. 7 in.

Fig. 18. Square-butted celt of dark grey flint, polished nearly all over both faces, with glossy patches; the cutting-edge straight and slightly expanded: found near Cambridge, and exhibited by Mr. Leslie Armstrong. L. 4 in.

The former will serve as a representative of the type commonly found in the Passage-graves (long-barrows) of southern Scandinavia, and the latter shows the expansion of the cutting-edge in the period of Cist-burials that may be in imitation of the metallic form after hammering. The entire Stone Age is therefore represented in outline by the specimens here laid before the Society.

DISCUSSION.

Mr. DALE expressed his interest in linking archaeology with geology, and thought it a bold move to question the late Mr. Clement Reid's views with regard to the Solent river; but some explanation had to be found for the deposit of plateau gravel over a great part of Hampshire, containing flint implements. His own faith had been shaken by the finds at Ringwood, and there was no obvious objection to the theory put forward in the paper. The occurrence of sarsens in the gravels showed that they were swept up from a large area. He could not accept as palaeolithic the rolled and ochreous implement from Netley, and recalled the stained and polished celts he had shown to the Society in 1918 (*Proc. Soc. Antiq.*, xxx, 22) : those came from the same gravel, north of Romsey. Another from Nursling had the same ochreous patina, though not so deep. Later palaeolithic man normally cut an edge all round his implements, but those were probably used for throwing, not as hand-axes.

III.—*The Devastation of Bedfordshire and the Neighbouring Counties in 1065 and 1066. By* Dr. G. H. Fowler, *Local Secretary for Bedfordshire.*

Read 9th March 1922.

THE work which I have the honour of laying before the Society to-night makes no pretence to originality of idea. That credit is due to Mr. Francis Baring, Dr. Round, and their predecessors. But I do venture to claim for it some small novelty in the application to the problem of more scientific methods than have as yet been applied to it, which should yield more certain conclusions. The starting-point of this study was the attempt of the late Mr. Baring to trace the route of the Conqueror's army in 1066 by the records of the devastation which are preserved in Domesday Book. For certain counties he took the values of the manors in King Edward's day (T. R. E. valet), a date which we may call 1065/6; and also the value when the manor was received by a Norman baron—in Domesday phrase the Quando Receptum or Q. R. valet—generally taken as 1067/8.[1] From what may be called a naked-eye comparison of these two values, he inferred that a part at least of William's army had passed through those manors which showed a heavy depreciation in 1067/8 as compared with 1066, and he provisionally indicated the routes followed by the columns. The weakness of his case, however, lay in the facts, first, that he apparently considered only the manors, and not all the holdings in each village ; secondly, that he merely considered the absolute figures as recorded by Domesday. To those who were not so familiar with the Great Survey as was Mr. Baring, the method was unconvincing, and, in consequence, many scholars have remained sceptical of his conclusions.

But a greater accuracy and a surer inference may be attained, first, by comparing the total values of all holdings, not merely of manors; secondly, by expressing the Q. R. valet as a percentage of the T. R. E. valet, so that an accurate comparison of the devastation suffered by adjacent villages may be easily and safely made.

[1] VALETS OR VALUES OF DOMESDAY HOLDINGS.

1. T. R. E. (tempore Regis Edwardi) 1065/6, followed by a Period of Depreciation.
2. Q. R. (Quando Receptum) . . 1067/8, followed by a Period of Recovery.
3. T. R. W. (tempore Regis Willelmi) 1086.

During the preparation of an analysis and synthesis of Domesday Book for Bedfordshire, I applied this more scientific method, and can gladly confirm the general correctness of Mr. Baring's view, although in detail my results differ considerably from his. In order, however, to ensure the correctness of the conclusions for Bedfordshire, it was found necessary to submit adjacent counties to a similar study, and the general results are embodied in this note.

Unfortunately, Domesday does not record the Q. R. valet in Oxon., Northants, and Hunts., but merely the T. R. E. and T. R. W. valets. For these counties, therefore, both the argument and the method must be slightly altered. Whereas in Bucks., Beds., Cambs., and Herts. the Survey records the actual depreciation at the Conquest, in Oxon., Northants, Hunts., we can only infer the original depreciation from the extent of the recovery or appreciation. The one method is deductive, the other inductive. The inductive method could have been used in both groups, but would have sacrificed wantonly the much surer results attainable by deduction. The percentages actually used for comparison are therefore

Bucks.
Beds.   Q. R.
Cambs. as p. c. of
Herts. T. R. E.

Oxon.   T. R. W.
Hunts. as p. c. of
Northants T. R. E.

It would appear, therefore, that in the first cases a depreciation of (say) 50 per cent., in the second cases an appreciation of (say) 150 per cent., alike imply a catastrophe to the village about the time of the Conquest. But when in every possible case in each county the holdings in each vill have been added and the percentages have been plotted on a map, the two sets of observations fit together sufficiently : the track obtained inductively for Oxon. leads to the track obtained deductively for Bucks.

The first cause of the depreciation is one which we ourselves know only too well—that which follows inevitably upon a war. In 1066 this was intensified by the displacement of the Saxon thane and intrusion of the Norman baron, and may be inferred as something like 20 to 40 per cent. of the value of the land. In the counties which we are considering, most of which lie on a possible line of march from Wallingford, where William crossed the Thames, to Berkhamstead, where he received the submission of the Londoners, there is also the possibility of devastation by his men. No chronicler records this route, but it is clearly marked by the depreciation in value of the vills through which the army passed. The devastation was not necessarily calculated and deliberate; the country was by no means ruthlessly laid waste, as some chroniclers and historians tell us. The statement of one well-known living historian—that William's plan was 'to isolate and starve out the city [of London] by a wide

belt of desolation '—is neither consonant with the facts of the case nor consistent with a rational policy. A conqueror who designs to stay does not wantonly ruin the land which will shortly be his own. But there was no commissariat, and the army had to find its daily food in the seed-corn and plough-oxen of the nearest vill. Nor could it move in a compact body, for that would mean starvation; it must break into columns with a common rendezvous, so as to increase the area from which its food-supply could be drawn.

The first step was to plot on a large map, which covered Northants, Oxon., Bucks., Beds., Hunts., Herts., and part of Cambs., every vill for which Domesday appeared to supply the necessary data, with its calculated percentage of depreciation or appreciation. This is reproduced as Map I (pl. IX). For the next step, some method had to be found by which the positive or significant evidence could be presented, while the negative or insignificant evidence could be omitted. By the statistical method of the Curve of Probability, an approximate limit was obtained, for each county separately, between the normal depreciation due to conquest and the abnormal depreciation due to the passage of soldiery or to deliberate savagery. Every case of a percentage beyond this limit was then plotted on a second map (pl. X), together with the larger royal manors and the boroughs, the main roads and rivers, and the modern county boundaries. Whenever possible, the percentage figure has been placed on the position of the present church, as most likely to indicate the old centre of population. I submit that a close study of the figures shown on this map can only lead to the conclusion that the devastated vills are arranged in lines which represent the routes of the various columns, and lead to reasonable objectives, mainly to the royal manors and boroughs. The Conqueror's policy in seizing these is obvious; the boroughs were fortresses to be secured, the royal manors were not only centres of English feeling but were to be guarded as the source of his future personal revenue.

In order to forestall criticism, it may be said at once that the description of the invasion which follows, although expressed in positive and definite phrases, does not profess to be any more than my personal interpretation of the undoubted facts; this being premised, the words 'seems, appears, probable, likely, perhaps', and such-like, which would be wearisome in their constant reiteration, have been suppressed.

Beginning at Crowmarsh, where, according to William of Jumièges, the Conqueror formed a fortified camp, he occupied the area between the Thames, the Thame, and the Icknield Way. While the forces concentrated, Crowmarsh was defended by a half-circle of billets, strengthened by two advanced lines; at this time the royal manor of Brill was seized. When the great advance began, the main body followed the Icknield Way, along the north-west slope of

the desolate and untilled Chiltern Hills, which guarded the right flank, to Harold's manor of Risborough and the royal manor of Wendover, with perhaps a flanking guard on the north. At this point there was no physical feature to prevent a direct advance on London, but the army must command the quarter from which attack might be expected—that is to say, the north. The Earls Eadwine and Morkere had taken no part in the battle of Hastings, but had withdrawn northwards to their earldoms; their attitude to William was still undetermined. Morkere might come down the Ermin Street with the Northumbrians, Eadwine down the Watling Street with the Mercians, as both had done a year before; and the Conqueror took his measures accordingly. The baggage proceeded by the Icknield Way to Luton, covered by a flanking column to the southward (which was now exposed); this halted at the heads of the Bulbourne and Gade valleys as the baggage moved. The main body struck first north, securing the royal manor of Aylesbury; then east in two divisions to the valuable group of royal manors, Leighton Buzzard, Houghton Regis, and Luton; the Watling Street was thus held, with an outpost to the north. From Luton the baggage proceeded later towards Hertford; the main body again turned north, seizing Harold's manor of Westoning by the way. The right wing wheeled east down a tributary of the Ivel, crossed it at Langford, and shortly afterwards turned south to the great rendezvous at Hertford, while a detachment secured Harold's manor of Hitchin. The left wing continued on to Bedford, thence along the higher and drier ground on the left bank of the Ouse; after crossing that river, for which more than one ford was available, it wheeled south towards Hertford. While a flying column planted an outpost on the Ermin Street and proceeded to Cambridge, a detachment seized Earl Waltheof's manor of Potton, and shortly afterwards also turned southwards.

At the beginning of the advance, a flying column had been despatched to secure Buckingham and to guard the left flank. Riding eastwards, it established a strong outer post on the Watling Street, and slackened its pace or halted till joined by the left wing for the advance on Bedford.

The evidence on which the argument is based will perhaps be clearer if at this point the detailed map of Bedfordshire is consulted (fig. 1). On this, the percentage depreciation of every vill is set on the position of the church or manor; the royal manors for which Domesday does not give the necessary data are marked R[1], and contour lines are swept round all vills which show a depreciation to 55 per cent. or less of their T. R. E. value, excluding all of a higher percentage. The lines in which these devastated vills lie thus become unquestionable.

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[1] The R has been accidentally omitted at Luton, which then included Stopsley and Hyde.

Fig. 1. Map of Bedfordshire, showing area of devastation in 1066, etc.

We have seen all columns eventually turning southwards towards Hertford. It must be obvious that an army could not be fed for any length of time if collected in a town, and the map shows General Head-quarters at Hertford, surrounded by a complete ring of billets which were reinforced northwards by outer lines. The posts on the east were astride of the Ermin Street; to the south-west, a garrison at St. Albans commanded the Watling Street. From Hertford the Conqueror had but to ride four miles to one of his southern posts, in order to meet Asgar the staller with London's aldermen at Little Berkhamstead, and to accept the submission of the city.

But apart from the march of William's army in 1066, the southern Midlands had been exposed to a far worse storm of devastation at the end of the previous year.

Tostig, earl of Northumbria, had made himself so hated that the men of Northumberland and Yorkshire rose against him about September 1065, outlawed him, slew his house-carls, and seized what they could find of his weapons and treasure. They then elected Morkere to be their earl, and he, as the Chronicle tells, 'went south with all the shire, and with Nottinghamshire and Derbyshire and Lincolnshire, until he came to Northampton; and his brother Eadwine came to meet him with the men who were in his earldom, and also many Britons came with him. There came Earl Harold to meet them, and they laid an errand on him to King Eadward [Edward apparently came up to Oxford meanwhile], and also sent messengers with him, and prayed that they might have Morkere to their Earl. And the King granted it, and sent Harold again to them at Northampton.'

The Chronicle further tells of the damage which they did to Northants and the neighbouring shires, so that the question arises whether their devastation can still be traced by its results as recorded in Domesday Book. The point has been already discussed by Mr. Baring and by Dr. Round, but remains capable of the same more detailed treatment as that already applied to William's advance.

In Northants the data are less reliable than in most of the counties already considered, because its Domesday, like those of Hunts. and Oxon., gives only the T. R. E. and T. R. W. valets; and there are other difficulties; consequently the problem must be approached with caution. Before attacking this, it will be well to consider the case of Hunts., because, so far as chronicles record, it almost escaped alike the rabble of Morkere and the more disciplined army of William. Consequently, the valets of the lands have in most cases been rising gradually and naturally for twenty years, and their original depreciation in 1066 was not as a rule the consequence of devastation, but the result of the unsettlement of conquest, change of ownership, and bad harvests. We can therefore

with some safety use the method of percentages, and judge of the 1066 depreciation by the 1086 appreciation. But on such uncertain ground we need a new weapon, in order to distinguish between the normal depreciation which follows war and the abnormal depreciation caused by deliberate devastation. This seems to be furnished by that very useful tool, the Curve of Probability.[1]

The total cases in Hunts. are unfortunately far too few to yield a satisfactory curve; there should be hundreds of cases instead of eighty-one.[2] But they at least show the normal for the county; they show that in 1086 nearly half the vills had appreciated to 100 per cent. of the T. R. E. valet—that is, they had
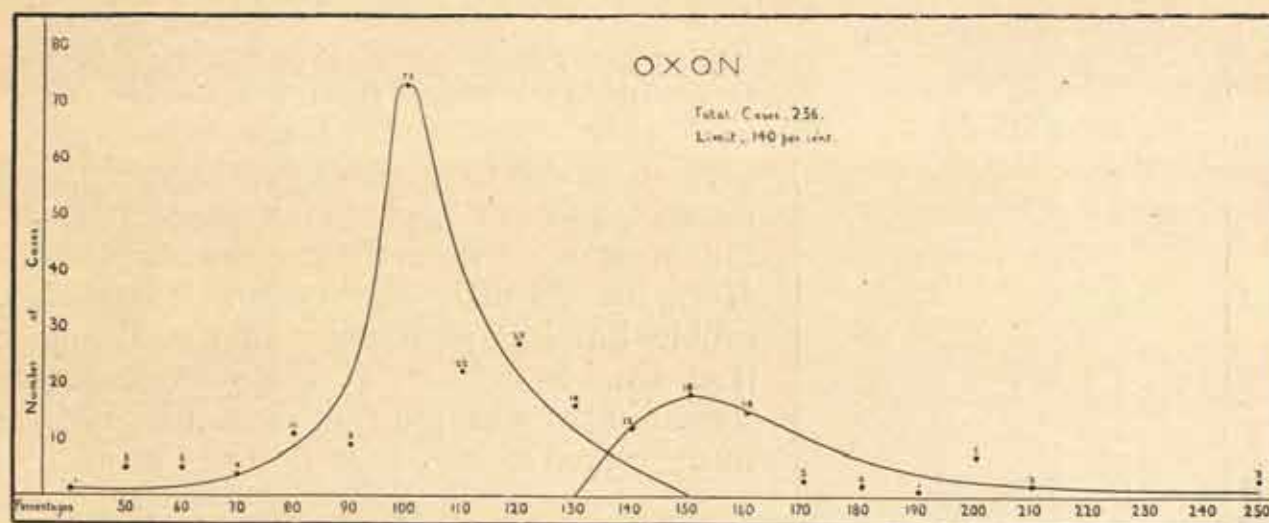
Fig. 2. Oxon.: Depreciation: curve of probability.

recovered to the same value as in 1066. We may take this to represent the normal for undevastated counties.

But far outside the limits of this curve come three cases in which the appreciation is to 230, 700, and 1,000 per cent. of the T. R. E. valet. Of these three cases certainly two, possibly all three, are in the area affected by Earl Morkere's raid. Further, the fall of the right-hand curve (increasing appreciation) is seen to be somewhat forced and artificial towards the lower point; but if it be resolved into two intersecting curves as in the graphs for Oxon. and Northants (figs. 2 and 3), they would be true curves expressible in a mathematical formula. The little second curve is hardly more than a hint, but it seems to indicate the point at which cases of abnormal appreciation begin, and

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[1] To any one unfamiliar with the construction of this, it may be explained that from a base line perpendiculars have been erected, the lengths of which are proportional to the number of cases in which the various percentages occur; a curve is then constructed so as to touch as nearly as possible the ends of the perpendiculars, and the resulting graph enables the statistics involved to be grasped easily.

[2] This graph has not been reproduced.

in consequence of its position 130 per cent. has been taken as the lower limit for instances of special devastation. The range of normal appreciation would then be from 30 to 130 per cent.

In Oxon., when treated similarly, the total cases are still lamentably few, but, being more numerous, show the point under consideration somewhat more clearly. There can be little doubt of the existence of two curves, intersecting at about 140 per cent., and the range of normal appreciation is from 40 to 140 per cent., very nearly the same figures as in Hunts.

But when Northants is handled in the same way the figures are very different; the range of normal appreciation is from 50 to 350 per cent., pointing to a general devastation for which there was no parallel in the other counties; and the abnormal appreciation, due to concentrated savagery, runs up to 4,440 per cent. This devastation was the work of no disciplined army such as the Normans formed, but of an unorganized rabble, burning, plundering, and enslaving in true Danish fashion; it helps us to realize something of what the Danish invasions meant to the Saxon in Alfred's day. The Chronicle is
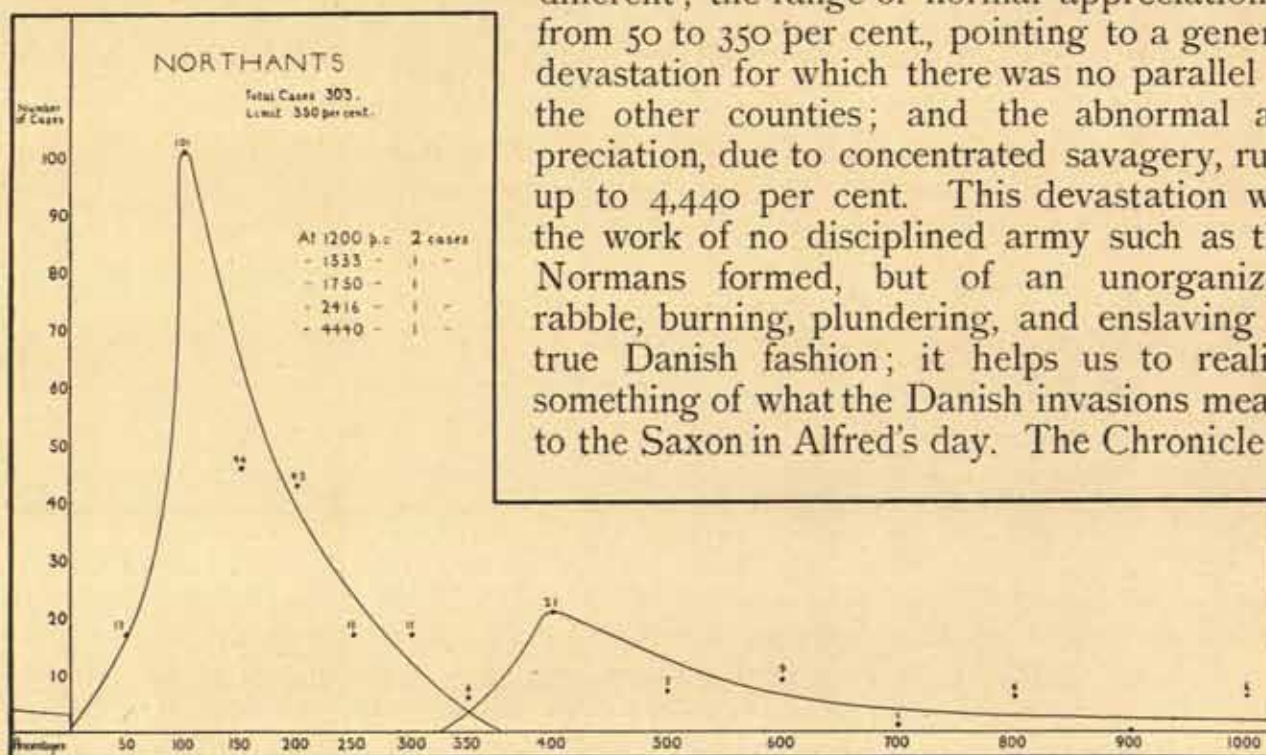
Fig. 3. Northants: Depreciation: curve of probability.

brief but pungent: 'the Northern men did great harm about Northampton while Earl Morkere went on their errand [that is, with Harold to the King], inasmuch as they slew men and burned horses and corn, and took all the cattle they could come at, which was many thousand; and many hundred men they took and led north with them; so that that shire and the other shires which are near there were for many winters the worse.'

Map II (pl. X) confirms Dr. Round's suggestion that the raiders entered the county at three points: Earl Morkere with the Northumbrians and Lincolnshire men by the Ermin Street at Stamford, the men of Derbyshire and Nottinghamshire at Market Harboro', Earl Eadwine with the Mercians and

Welchmen by the Watling Street. These lines are shown clearly enough, but we learn more. From Stamford one body sacked Peterboro', the unfortunate Golden Borough which was every raider's prey, and passed down both banks of the river Nene to Oundle, round which the devastation was hideous : they then broke into several bands ; a second body seems to have followed the river Welland. All lines converged upon Northampton, but the raiders naturally could not be supported in the town itself, and seem to have halted in an ellipse (dotted on Map II), the radius of which varies from 6 to 10 miles.

Between Northampton and the area traversed by William's columns in the following year are naturally some uncertain tracks : notably a well-marked route along the upper reaches of the Ouse, possibly a raiding party of Northumbrians from Kimbolton, possibly one of William's flanking columns. Earl Morkere's route to Oxford seems to be shown round the head-waters of the Cherwell and along its right bank ; but this and other points must remain uncertain till a similar study has been made of the Domesdays for Warwickshire and Berkshire by some one well acquainted with these counties. Again, only by study of Berkshire, Middlesex, Surrey, and Hampshire can the Conqueror's routes to Wallingford be determined ; the entries along the Thames in south Bucks. seem to indicate parts of this. Yet again, Cambs. and Essex must be considered before the concentration at Hertford is entirely understood.

There seems to be ample time for the longest manœuvre, that of the flying column which seized Buckingham and passed by way of Bedford to Cambridge. It is generally accepted that William was at Wallingford about the beginning of November, after which we have no fixed date till his election and coronation on Christmas Day. A rough measurement in a straight line from church to church along the route of the flying column gives about 110 miles from Crowmarsh to the outer billets round Hertford ; we may add one-third for détours and call it 150 miles. There are at least six weeks available, but if we allow only a month of 30 days as the time occupied, a speed of 5 miles a day is all that is needed to cover the ground, ridiculously little for horsemen even in the roughest country, and permitting a day or two to settle a small garrison where needed.

With the southern columns, which would include the foot soldiers, the distances between the devastated vills are so short as to suggest that they marched *en échelon*, one division billeting itself in vills 1, 3, 5 ; the next division in vills 2, 4, 6, and so on.

In conclusion, I can only express the hope that the Society will agree with me in feeling that this little bit of history yields a fresh tribute to the political wisdom, to the power of discipline, and to the mastery of the art of war, displayed by William the Conqueror.

Discussion.

Mr. Page held that Domesday could only be interpreted by such methods as Dr. Fowler had adopted, and he had little to criticize in what was a careful and learned piece of work. With regard to William's negotiations with the Londoners, Little Berkhamstead had always been small and unimportant, whereas Great Berkhamstead was already a borough in Domesday. It had been a large market town in the time of Edward the Confessor, and was just such a place of meeting as William would have selected. His own view was that the Conqueror took up his quarters and conducted the negotiations at Great Berkhamstead while his army went to Hertford and Little Berkhamstead. This view was strengthened by the entry in the Chronicle that during the negotiations the army plundered wherever it went.

Canon Lacey asked if it was a just inference that the country between Northampton and Oxford was as much devastated by the peaceful advance of Harold and Morkere as by war-makers. Harold's men had to live on the country they passed through, and it was possible that the statistics in the paper were falsified by the effects of marches and counter-marches by other armies.

Dr. Fowler replied that Oxford might have been devastated by Morkere, but he could not be definite on the point till the neighbouring counties had been worked out. William's army was a disciplined one and did little damage, Morkere's a great deal. His suggestion was that the army was billeted round Hertford, not round Berkhamstead, and Hertford was only four miles from Little Berkhamstead.

The President professed a profound admiration for the ingenuity displayed in dealing with the material; and criticism involved an intimate knowledge of the country and of the documents. He regretted that no more Fellows with the requisite equipment were present, as Dr. Fowler would be the first to welcome expert criticism. Such an instructive demonstration of a puzzling state of things deserved the best thanks of the Society.

Notes to the Maps.

Map I (plate IX).[1]

The County Boundaries are indicated by dot-and-dash. The Boroughs and Royal Manors, for which no valets are available, are shown by black rings and initials.

Map II (plate X).

The County Boundaries are shown by a line of dots; the Roads by dashes (thickened when forming part of the Norman route); the Route of the Columns (when off a road) by thick even lines; the Rivers by thin uneven lines. Round Head-Quarters at Wallingford and Hertford the billets seem to lie in strategic lines indicated by dotting.

Map III (fig. 1).

From 'Bedfordshire in 1086' (Beds. Hist. Rec. Soc., quarto mem., i).

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[1] Erratum on pl. IX : *for* Leckhampton (N.W. Bucks.) *read* Leckhampstead.
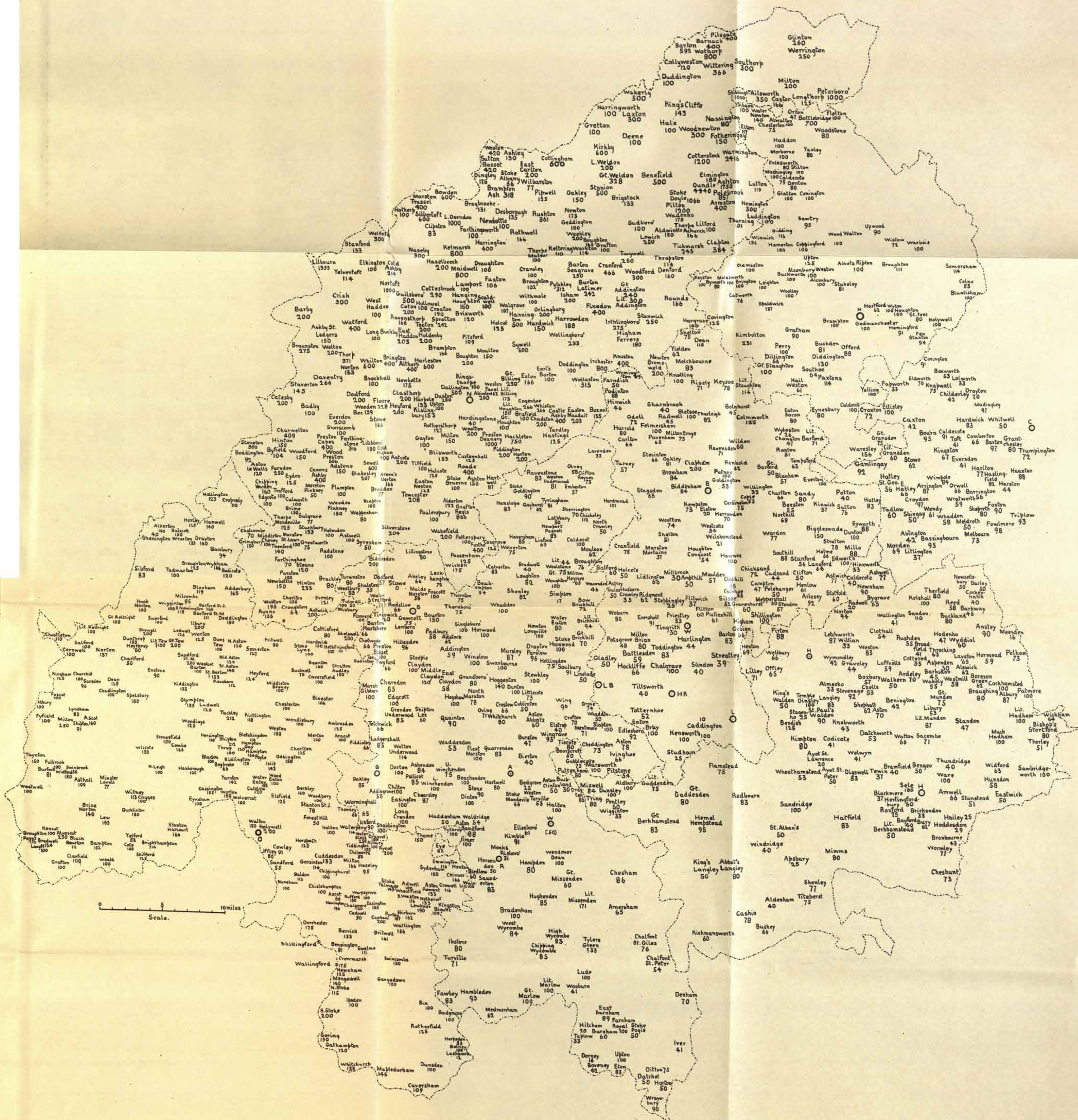
MAP OF NORTHANTS, OXON., BUCKS., BEDS., HUNTS., HERTS., AND PART OF CAMBS., SHOWING PERCENTAGES OF DEPRECIATION OR APPRECIATION
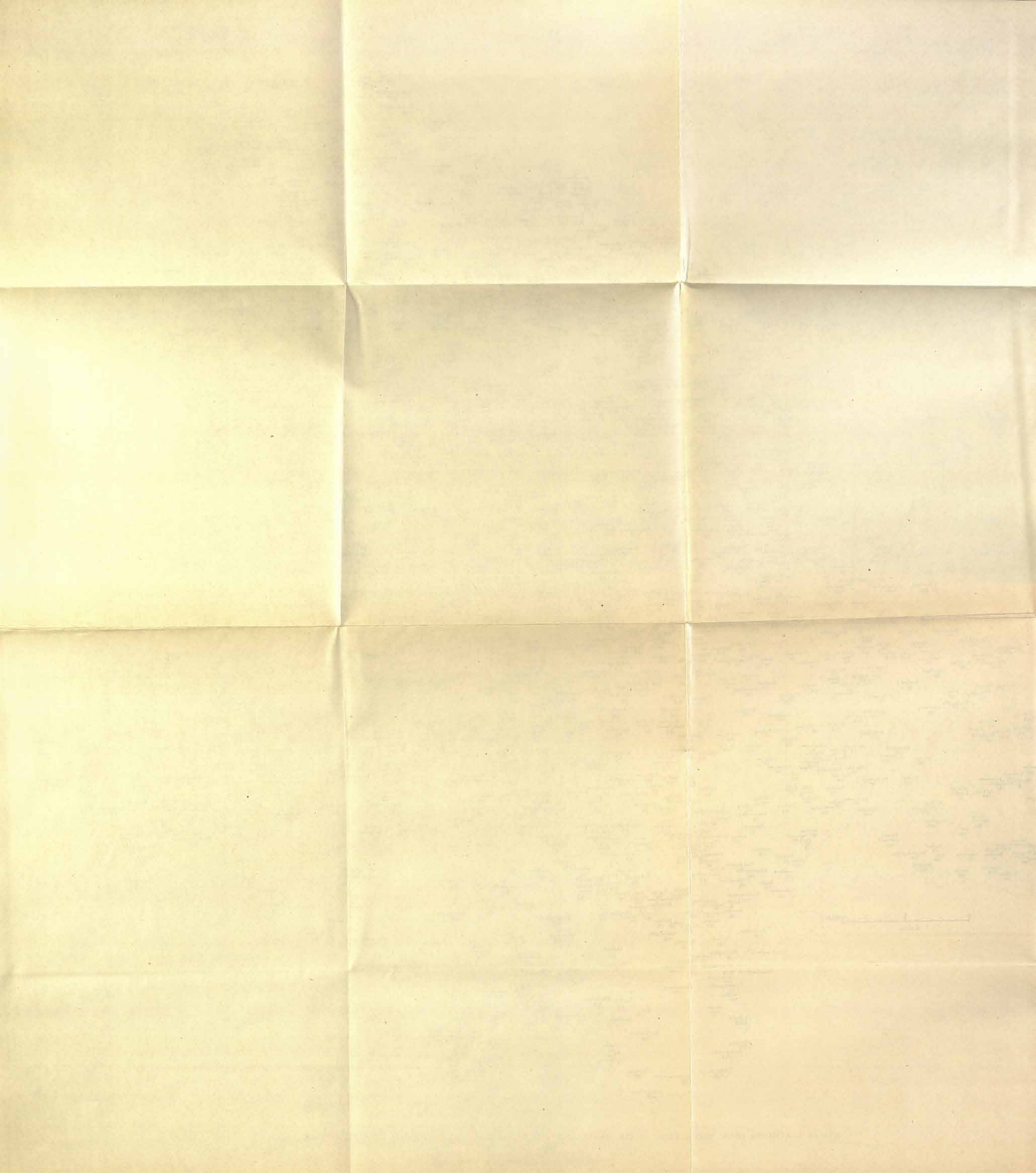
● Royal Manors and Burghs
═══ Roads
····· County Boundaries

Depreciation
{
Bucks. 58 or less
Beds. 55 " "
Cambs. 55 " "
Herts. 53 " "
}
Appreciation
{
Hunts. 130 or more
Oxon. 140 " "
Northnts. 350 " "
}
per cent.
of T.R.E.
Valet

R. WELLAND

R. NENE

R. OUSE

R. OUSE

R. OUSEL

R. OUSE

R. CHERWELL

R. IVEL

R. THAMES

N O R T H A N T S

H U N T S

C A M B S

B E D S

B U C K S

O X O N

H E R T S

STAMFORD
MARKET HARBORO'
NORTHAMPTON
CAMBRIDGE
BEDFORD
ADDERBURY
BLOXHAM
BUCKINGHAM
WESTONING
HITCHIN
WALDEN
LEIGHTON
HOUGHTON
LUTON
HERTFORD
SHIPTON
BRILL
AYLESBURY
WENDOVER
RISBORO'
OXFORD
BAMPTON
LANGFORD
BENSINGTON
WALLINGFORD

0 5 10 miles
Scale

MAP OF NORTHANTS, OXON., BUCKS., BEDS., ETC., SHOWING PERCENTAGES OF ABNORMAL DEPRECIATION OR APPRECIATION
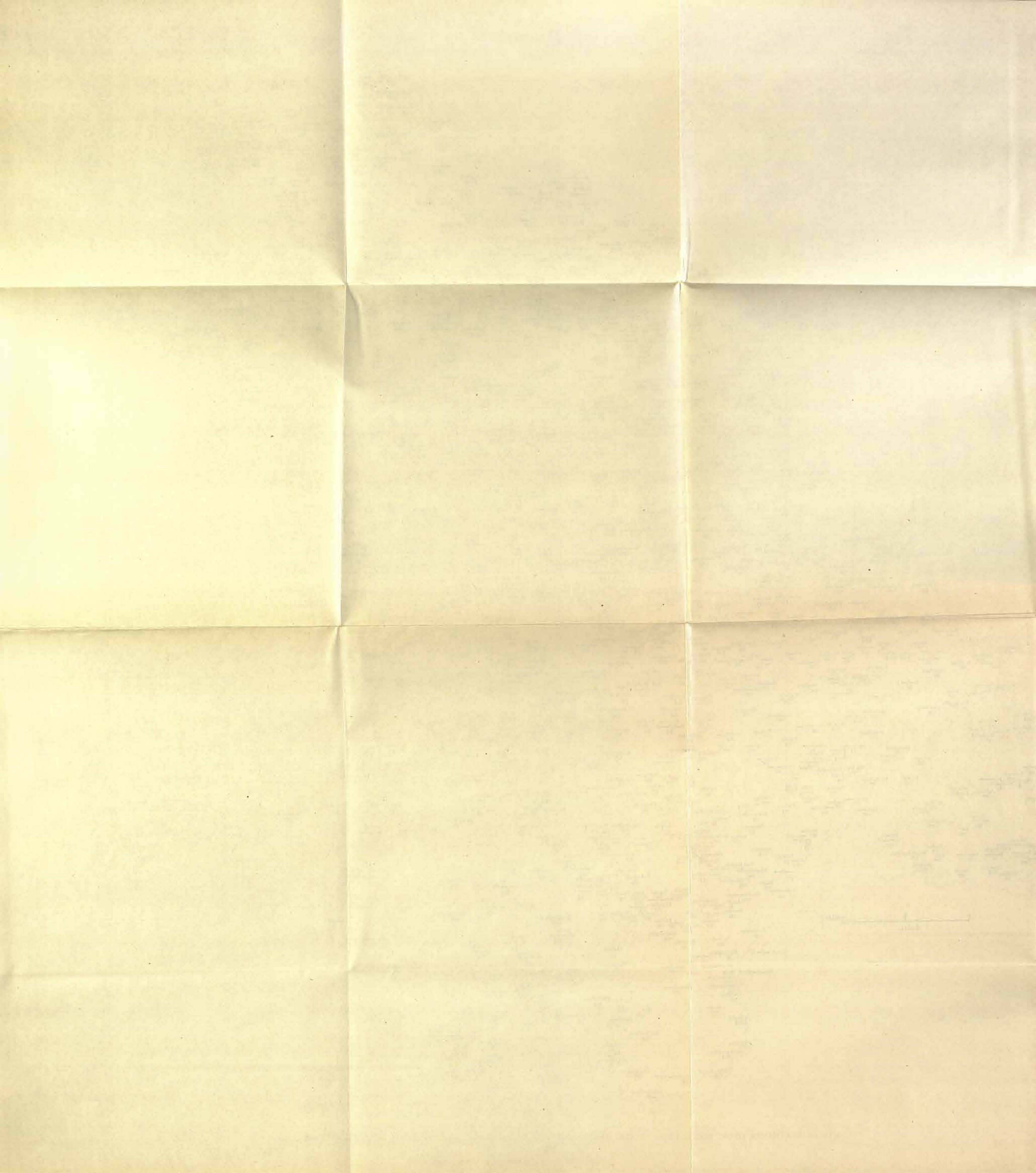
IV.—*Weaverthorpe Church and its Builder.*
By JOHN BILSON, *Esq., F.S.A.*

Read 22nd June 1922.

THE churches of the Yorkshire Wolds afford much interesting material for the study of the architecture of the Yorkshire village church during the second half of the century following the Norman Conquest. As a rule they have undergone much less alteration and enlargement than the churches of districts which have seen more change,[1] and an unusually large proportion of them retain, if not a considerable part of their original structure, at least enough to make it easy to reconstitute their original plan. With very few exceptions, their plans follow the common type of aisleless oblong nave and narrower square-ended chancel, with or without a western tower, though they vary greatly in size, from the large scale of the nave of Hunmanby to the little nave of Kirkby Underdale, the length of which is less than one-third that of Hunmanby.

So far as my observation has extended, there is no building in the Wold churches which can be recognized as of pre-Conquest date. Very few of them can be assigned to a date before the third decade of the twelfth century, and all those where original work has survived seem to come within the period of Norman Romanesque detail, before the influence of the coming Gothic had reached this district. This preponderance of twelfth-century building is of course more or less common in other regions, but there is no doubt that the story of the building of these Wold churches must be connected with the slow recovery of this part of Yorkshire from the Conqueror's terrible harrying of 1069. Half a century later William of Malmesbury records that the land for miles still lay bare and uncultivated,[2] and the truth of this statement seems to be reflected in the history of the church architecture of the Wolds.

Weaverthorpe lies in a strip of country within the northern boundary of the East Riding which the evidence of Domesday proves to have suffered as

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[1] This is more especially true of the district north of the present railway from Beverley to Market Weighton. South of this line, the churches generally have been much more altered—Newbald being a notable exception.

[2] *De Gestis Regum Anglorum*, ed. Stubbs (Rolls Series), ii, 309.

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terribly as any part of Yorkshire. The district then derelict extended from the western brow of the Wolds overlooking Settrington to near Bridlington and Hunmanby on the east, and from the Derwent on the north to North Dalton and Burton Agnes on the south—an area about 20 miles in length by 12 to 16 miles in width. Excluding some half-dozen places within the fringe of this area, the district included 76 vills, comprising more than one-fifth of the total number of carucates assessed for the whole Riding, with a normal agricultural capacity of more than 400 plough-teams, and in the whole area there were no oxen ploughing at all, and no population is recorded.[1] The Domesday evidence must not be strained to support an inference that the district was absolutely depopulated. The survivors may have eked out a wretched existence on the devastated land with a few sheep, swine, or hens;[2] but what is certain is that no agriculture was being carried on which would bear any taxation. And when we remember that our record dates from more than sixteen years after the harrying, it is obvious that considerable time must have elapsed before there could be a return to anything like normal conditions.

The two oldest churches in this district are Wharram-le-Street and Weaverthorpe, and the former seems to be the earlier of the two. Both have the usual aisleless nave and chancel, with western tower, but the nave of Wharram is much smaller (only 29 ft. by 15 ft. 10 in. internally), and the church has been much more altered.[3] The tower has been called 'Saxon', and its belfry windows with their flanking pilasters are certainly of pre-Conquest type; but the whole church was of one build, and the details of its west doorway and the capitals of the chancel arch and south doorway are of post-Conquest date, and not of the earliest.[4] We shall see something of the same overlap, to a less extent, at Weaverthorpe. Both places are recorded in Domesday as 'waste',[5] and, on the analogy of Weaverthorpe, it seems to be probable that the church of Wharram was built by Nigel Fossard, the Domesday under-tenant, whose son Robert afterwards gave it to the canons of Nostell,[6] as Weaverthorpe also was given by the sons of its builder.

The village of Weaverthorpe stretches along the road which runs at the

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[1] The Domesday evidence for these statements is analysed in detail in the Appendix (p. 69 below).

[2] Cf. Dr. Beddoe in *Yorks. Archaeol. Journal*, xix, 58.

[3] A north aisle was added to the nave in the fourteenth century. The chancel was rebuilt about 1862 (*Assoc. Architectural Societies' Reports*, vi, cxvi), and the south wall of the nave has also been rebuilt.

[4] I think that the original church cannot be attributed to an earlier period than the last years of the eleventh century.

[5] *Domesday Book* (Rec. Com.), i, 303 a, 307 a.

[6] *Early Yorkshire Charters*, ed. W. Farrer, ii, no. 1012.

TOWER

NAVE

FONT

CHANCEL

PORCH

N

12TH CENT: 2ND DECADE

14TH CENT: 1ST HALF

70 FEET
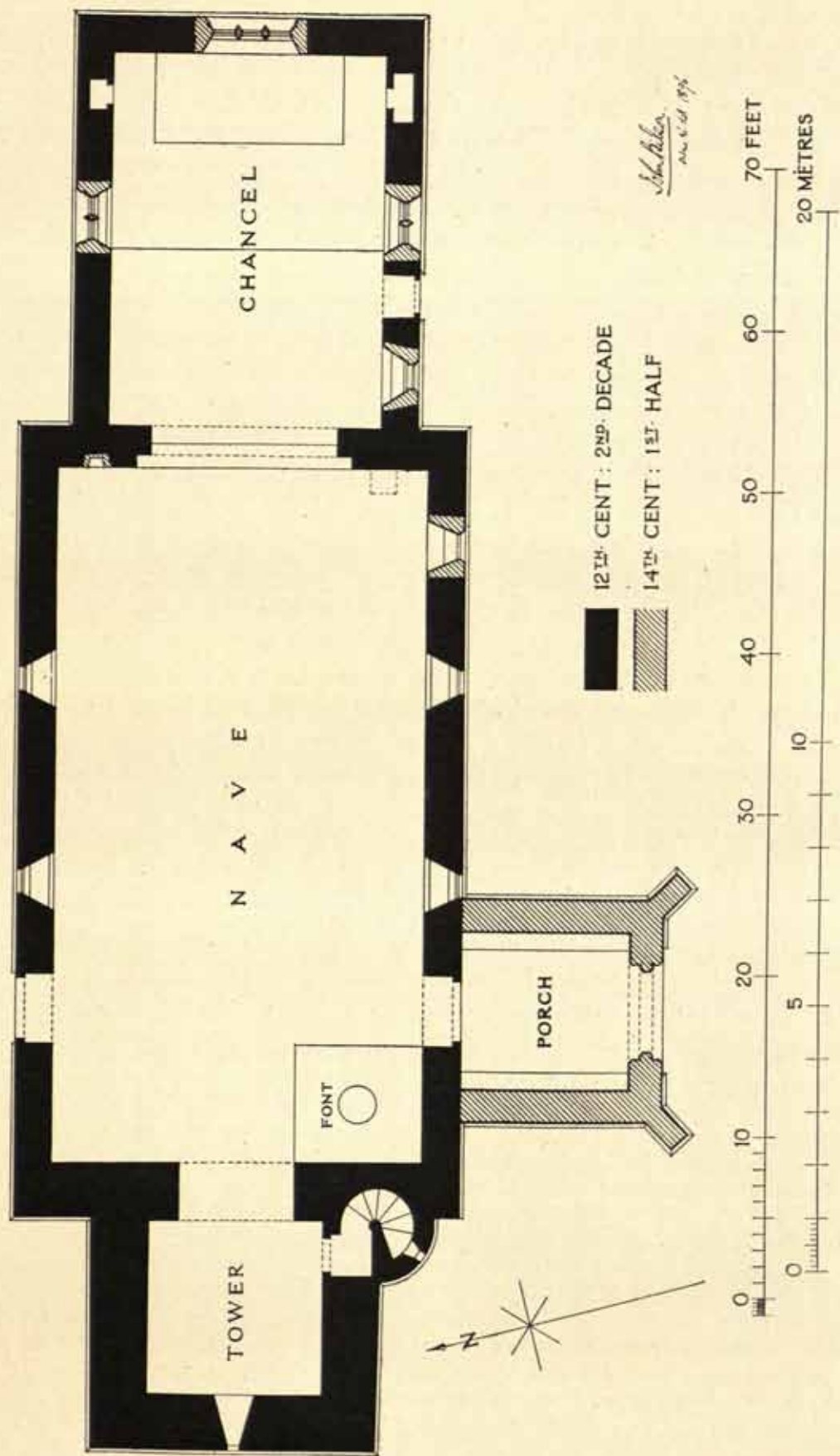
20 MÉTRES

60

50

40

10

30

5

20

10

10

0

0

Fig. 1. Weaverthorpe church : ground plan.

bottom of the long central valley of the northern Wolds. Its church[1] occupies a commanding position on the northern slope above the village, and it stands nearly over the north-west angle of an ancient rectangular earthwork.[2]

The plan of the church (fig. 1)[3] consists of a square-ended chancel, an oblong nave (with later south porch), and a western tower.

The walls are built with squared stones, showing ashlar faces both externally and internally. The masonry is axed, set with joints generally from $\frac{5}{8}$ to $\frac{3}{4}$ in. in thickness. The courses vary in height, most generally from 9 to 12 in. The stone is calcareous grit,[4] doubtless from Filey Brig.[5] The walls of the chancel and the side walls of the nave are only 2 ft. 4 in. in thickness, and the east wall of the nave 2 ft. 7 in.

The chancel measures within the walls 22 ft. 10 in. in length by 16 ft. 11 in. in width. The priest's door in the south wall is finished with a lintel externally,[6] and internally by an arch of less than a semicircle in height. None of the original windows of the chancel remains. The east window of three lights, the north window and the south window to the east of the priest's door, both of two lights, have flowing tracery under square heads, and are insertions of the second quarter of the fourteenth century. The single-light window in the south wall to the west of the priest's door, which has a trefoiled head externally, and a pointed and chamfered rear-arch, is an insertion of the beginning of the four-teenth century; its sill is lower than those of the other windows (about 4 ft. from floor to glass). In each of the side walls, near to the east end, is an aumbry, both of which seem to be original.

The chancel arch (pl. XI, 3), which is low and wide, has square jambs recessed on the nave side only; the square-edged semicircular arch, of two orders next the nave, springs from simple imposts moulded on their lower edge with a large quirked roll, which is not returned on the east and west faces (an early characteristic). The opening has a clear width of 11 ft. 7 in., and the height from the nave floor to the springing is about 8 ft.

To the north of the chancel arch, next the nave, is a later recess for an

[1] Although it is now twenty-six years since I measured the plan of Weaverthorpe church, solely for its architectural interest, it was only after revisiting the church last autumn with my friend Mr. S. D. Kitson, that the identification of its actual builder suggested itself.

[2] Described in *V. C. H. Yorkshire*, ii, 19.

[3] The church is described, with plan and other illustrations, in *Four Churches in the Deanery of Buckrose*, by James Bayly (1894), pp. 1-5, and pls. i to v. The description and illustrations include minor details not forming part of the original structure, and not therefore mentioned in this paper.

[4] There are a few blocks of fossiliferous limestone, of the local coralline oolite type. The west doorway of the nearly contemporary tower of Kirkby Grindalythe church is largely built of this stone.

[5] For building-stone from Filey Brig, see *Mon. Angl.* vi, 288, no. 14; *Chartulary of Bridlington*, ed. W. T. Lancaster, 80; Farrer, *Early Yorkshire Charters*, ii, no. 1176.

[6] The jambs and lintel, square-edged originally, have been chamfered later.

Fig. 1. Exterior from SW.

Fig. 2. Belfry stage from SE.

Fig. 3. Interior looking East.

Fig. 4. Interior looking West.

WEAVERTHORPE CHURCH

image. On the south, the late stone corbel, on which now stands a modern statue of St. Andrew, seems to have been fixed here only when the church was restored.

The nave is 42 ft. 11 in. in length, and 23 ft. 1½ in. in width, within the walls. The height of the walls is about 21 ft. from the floor, and there is a slight set-back of the face on the east and west walls at the level of the top of the side walls, which doubtless indicates the line of an original flat ceiling. The original roofs of the nave and chancel had been lowered, and the existing open roofs date from the restoration of the church by the late G. E. Street in 1871–2.

The nave is lighted by two original windows on each side, which fortunately remain unaltered. They are set high in the walls, the glass line at the sill being about 9 ft. above the floor. They are only 1 ft. 5½ in. in width, and less than 6 ft. in height, and on the outside have plain square jambs and semicircular arches. Internally the jambs have wide splays, which are continued around the arch. In the south wall, between the easternmost of the two original windows and the south-east angle, is an inserted single-light window of the second quarter of the fourteenth century, with a cusped ogee head externally, and a pointed rear-arch over shouldered jambs ; the sill of this window is much lower than those of the original windows (4 ft. 9 in. from floor to glass).
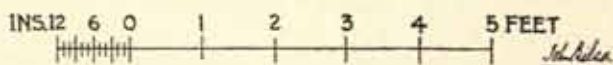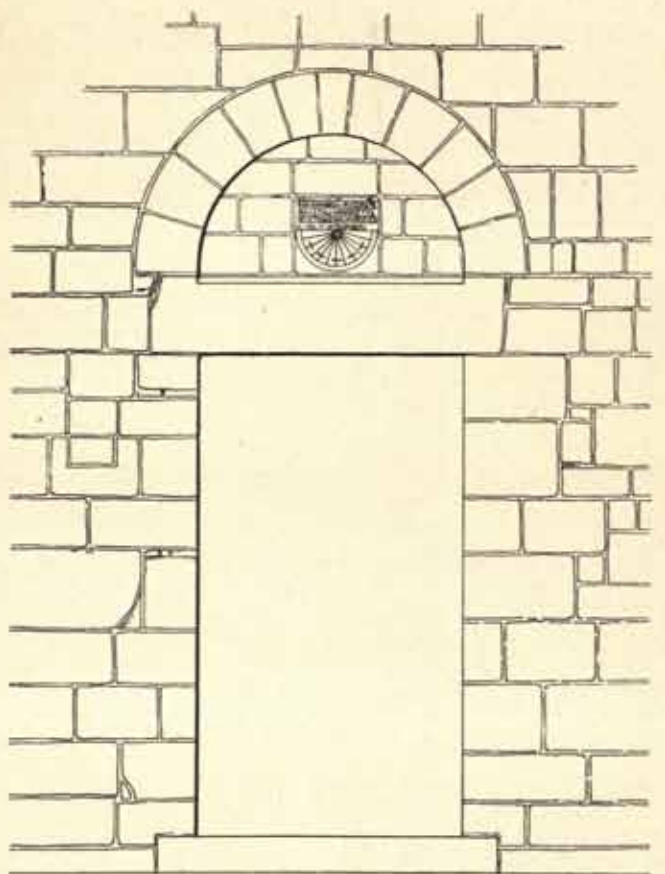
Fig. 2. Weaverthorpe church : south doorway.

The two doorways of the nave, north and south (fig. 2), each have square jambs and lintel and semicircular relieving arch, enclosing a slightly recessed solid tympanum. The dial-stone in the tympanum of the south doorway will be discussed presently. Internally the two doors each have square jambs and semicircular arch. The south porch is an addition of the early part of the fourteenth century. Its roof had been lowered, so that its line crossed the

external arch of the doorway, and the present high-pitched roof dates from Street's restoration.

Externally the walls of the nave and chancel have a chamfered plinth, but there are no string-courses, externally or internally, and there are no buttresses.

The tower measures internally 10 ft. 10 in. from north to south by 10 ft. 8 in. from east to west. On the ground floor its walls are 3 ft. 5–7 in. in thickness, and the external width of its west face is 17 ft. 8 in. It has a newel-stair leading to the belfry stage, which forms a quadrant projection externally in the angle next the south-west corner of the nave.[1] There is no west doorway, and the ground-story of the tower is lighted only by a narrow loop immediately below the floor of the ringing chamber.

The tower arch (pl. XI, 4) is tall and narrow, in strong contrast to the proportions of the chancel arch. The simple square opening has a clear width of 7 ft. 2 in., and the height from the floor to the springing of the arch is 14 ft. 9¼ in. The springing is marked by simple imposts moulded on their lower edge with a large quirked roll (as to the chancel arch), which is not returned on the east and west faces. The semicircular arch of one square-edged order has a plastered rubble soffit between the two ashlar faces. Above the arch is a doorway opening with square unrebated jambs and lintel, 3 ft. 2 in. in width, and 5 ft. 11 in. in height; its sill is now about a foot above the slight set-back in the wall-face at the level of the top of the side walls of the nave. Doorways in this position are frequently found in pre-Conquest towers,[2] and the position of this doorway indicates that it was designed to give access from the ringing-chamber to the space above the original flat ceiling of the nave.

Externally, from its chamfered plinth the tower rises stark and perfectly plain for three-quarters of its height, unbroken by buttress, string-course, or set-off.[3] The lower part is pierced only by the little loop, placed high up, which serves for a west window. The ringing-stage above has only a little loop on each of its three free faces, and the stair is lighted by three small loops. The base of the belfry stage (pl. XI, 2) is marked by a chamfered string-course, which is continued around the stair projection which finishes immediately above with two plain weatherings. The wall-faces of the belfry stage are set back slightly above this string-course. The two-light belfry window on the

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[1] Few of the early towers on the Wolds have stone stairs, but the tower of Garton-on-the-Wolds has one in the same position, forming a square projection externally.

[2] The tower of Wharram-le-Street has a semicircular-arched doorway in this position.

[3] So also in the towers of Wharram-le-Street and Kirkby Grindalythe, which are of similar size and proportion. The tower of Wharram has no plinth.

south face has semicircular sub-arches springing from a central shaft with plain cushion capital and chamfered abacus; the jambs are recessed, and from a chamfered impost returned around them springs the enclosing semicircular arch of two orders, all the arches being unmoulded. The openings on the east, north, and west faces are precisely similar, except that the jambs are not recessed, and the outer arch has only one order. Above the sub-arches of all the openings, the tympanum shows curious plain projecting corbels under the outer arch. Above the belfry stage is a chamfered string-course, with two blocking-courses over it, which now form the finish of the tower. A pyramidal lead-covered roof added to the tower by Street was removed in 1898.

The church was very well built, as is proved by its excellent condition after eight centuries. With the exception of certain characteristics to be noticed presently, its architecture belongs to the earlier phase of the Norman Romanesque, treated with the utmost simplicity of detail. The arches are unmoulded, there are no shafts (except to the belfry windows), and nothing of the chevron ornamentation which was already making its appearance in the greater churches. Indeed if we were to date the church from analogous work in the greater churches, we should certainly attribute it to the last decade of the eleventh century. Its real date is twenty years later, and reminds us once more that remote village churches may well be later than they look.

In spite of the essentially Norman character of all its details, it is interesting to notice the survival, nearly half a century after the Conquest, of certain characteristics of the English building-manner of the days before the Conquest. Such are the relative thinness of the ashlar-faced walls, the absence of the usual pilaster buttress, and the tall proportion of the unbuttressed tower.[1] The dial is also a survival of an earlier tradition.

The font[2] was, as usual, the last thing made for the new church. It is of stone, cylindrical in shape, 2 ft. 4 in. in diameter, and 2 ft. high, and now stands on a modern plinth. Its surface is covered with a diapered pattern of octagons and circles, rather rudely cut. Some of the octagons contain a saltire, as on the font at Rudston.

The dial-stone, which gives us the key to the story of the church, is built (not quite centrally) into the tympanum of the south doorway (fig. 2), immediately above the lintel. The stone now measures 14 in. in width by $12\frac{1}{2}$ in.

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[1] The nave of Garton-on-the-Wolds, a later example obviously influenced by Weaverthorpe, has the same simple windows set high in the walls, but the bays are divided by pilaster buttresses stopping into the usual corbel-table. The tower of Garton has pilaster buttresses, and its broad and low proportion (15 ft. square internally) strongly contrasts with the tall proportion of the towers of Weaverthorpe, Wharram-le-Street, and Kirkby Grindalythe.

[2] *Trans. East Riding Antiq. Soc.*, x, 109, and pl. vii.

in height, but its upper part has been cut off, for above the uppermost legible line of the inscription there are distinct traces of letters, through which the top bed of the stone now passes. Immediately above is a shallow stone of the same width as the dial-stone, and, if the latter is in its original position, its original height may have included the space now occupied by the stone above.[1]

The lower part of the stone is occupied by the dial (fig. 3), the semicircle of which is divided into twelve parts. The bronze stump of the gnomon still

Fig. 3. Weaverthorpe church: dial over south doorway (¼).
(From a drawing by W. G. Collingwood, Esq., F.S.A.)

remains. Above the dial is the following inscription, in four lines of incised letters:

+ IN • HONORE • SCI • ANDREÆ • [2]
APOSTOLI • HEREBERTVS
WINTONIE • HOC • MONASTERI
VM • FECIT • IN • TEMPORE • RE

The last letter, E, is incomplete. As Mr. W. G. Collingwood suggests,

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[1] Mr. James Bayly has kindly informed me that, when he first went to Weaverthorpe after the restoration had been completed, he was told that the end of a beam of the lowered roof of the porch had been let into the tympanum immediately above the dial-stone. The stone above would thus appear to have been inserted to fill the beam-hole, when the church was restored and the existing roof of the porch took the place of the lowered roof.

[2] The Æ is almost but not quite certain. There is space for something between the two E's, and there seems to be the start of a sloping incision at the top of the second E. The face of the stone has been chipped here, but the lower right-hand edge of the chip follows the sloping stroke of the A. There seems also to be some trace of the middle horizontal stroke of the A.

'the carver seems to have meant to carve REGIS, but stopped before the E was completed, as the Great Edston carver stopped'.[1] Evidently he had not spaced out his lettering beforehand, and found that he had no room to finish it.

The style of the lettering is more advanced than that of the Kirkdale dial, the date of which is fixed as 1055–65.[2] The reversed middle stroke of the N's occurs on the seal of Ranulf Flambard, bishop of Durham (1099-1128),[3] though of course this is more natural on a seal. In the absence of any complete study of English lapidary inscriptions of this period, it is perhaps not safe to say more than that the character of the lettering is quite consistent with the early twelfth-century date to which on other grounds it must be attributed.

More than forty years ago, the late Father Haigh discussed the inscription,[4] and read into it the names of archbishop Osketel and the Northumbrian king Regnald (which are certainly not there), and on the strength of this interpretation he postulated the foundation of a monastery at Weaverthorpe in the second half of the tenth century, with Herbert as abbot. Mr. Collingwood has shown that this attribution is illusory. We shall see, however, that it is possible to go much beyond a merely negative conclusion. The inscription does not date from the tenth century, but from the second decade of the twelfth. It does not record the foundation of a monastery, but the building of a 'minster'[5]—the existing church. And its builder was not an abbot, but was a prominent officer of the court of the Norman kings, and the father of St. William of York.[6]

The proof of the identification of the builder is found in the feoffment made by Thomas II, archbishop of York (1108–1114), to Herbert the chamberlain and his son of Londesbrough with Towthorpe, Weaverthorpe with Helperthorpe and the two Luttons, 1 carucate in Thirkleby, 3 carucates in Sherburn, 3 carucates in Birdsall,[7] 5 carucates in Mowthorpe, 1 carucate in 'Ulkiltorp',

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[1] *Yorks. Archaeol. Journal*, xxi, 275, where Mr. Collingwood has described the stone and illustrated it by a very careful drawing. I have to thank Mr. Collingwood for his kindness in placing his drawing at my disposal, to be reproduced here (fig. 3). The dial-stone at Great Edston is described and illustrated by Mr. Collingwood in *Yorks. Archaeol. Journal*, xix, 329.

[2] *Ibid.*, xix, 344 (drawing by Mr. Collingwood).

[3] C. H. Hunter Blair, 'Durham Seals,' in *Archaeologia Aeliana*, 3rd ser., xiv, 440, and photograph 3110.

[4] *Yorks. Archaeol. Journal*, v, 144.

[5] Compare the 'SCS GREGORIVS MINSTER' of the Kirkdale inscription, which also records the building of the church there.

[6] In his description of the church, the Rev. T. Bayly (who was vicar of Weaverthorpe in Father Haigh's time) suggested that the Herbert of Winchester of the inscription might perhaps be identified with St. William himself (*Assoc. Arch. Societies' Reports*, xiv, xxviii). Cf. James Bayly, *op. cit.*, 3.

[7] The archbishop's holding in Birdsall is given as 2½ carucates in Domesday (i, 303 *a*).

4 carucates in Croom,[1] in Cowlam the church with ½ carucate,[2] a house in Beverley, in York the church of St. John in Ogleforth with the land from the church to the gate between the road and the ditch, and the lands in Gloucestershire which Hermer and Turchetel held, for the service of three knights.[3]

Herbert the chamberlain[4] is first mentioned in the Hampshire Domesday, in the latter part of the record, where we find several tenants who, as royal officials, must have been connected with the court and seat of government, with the treasury, at Winchester. Although he was one of the most important of these, Herbert only held in chief two manors, Larode and Soberton. He also held Brockhampton (in Havant) under Hugh de Port, and land in Micheldever under the abbey of St. Peter of Winchester (the New Minster).[5]

Herbert does not attest any of the published charters of William I or William II,[6] but from the later years of Rufus onward his name occurs in several charters which illustrate his connexion with the court and with Winchester and the treasury. Before 1098 he attests, after bishop Walkelin and Urse d'Abetôt, a restitution to Westminster by Robert the dispenser, the brother of Urse.[7] His description here as *Herbertus camerarius regis de Winton* is especially interesting in its confirmation of the *Herebertus Wintonie* of the inscription on the Weaverthorpe dial-stone.[8] The Abingdon chronicler (between 1097 and 1100) calls him *regis cubicularius et thesaurarius*,[9] a designation which recalls the original connexion between the treasure and the bedchamber.[10] In the next century the continuator of Hugh the Chanter calls him *camerarius et*

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[1] The holdings from Helperthorpe to Croom inclusive are described in Domesday as berewicks or soke of Weaverthorpe.

[2] The Domesday assessment of these East Riding lands (with the *three* carucates in Birdsall) amounts to a total of 66 carucates. Cf. Dr. Round's 'six-carucate unit' (*Feudal England*, 69).

[3] *Mon. Angl.* vi, 1196, no. 109. Farrer, *Early Yorkshire Charters*, i, no. 25. The suggestion by Mr. A. S. Ellis (*Yorks. Archaeol. Journal*, iv. 118) that Herbert the chamberlain might possibly be identified with Herbert son of Aubri, the archbishop's tenant in Lincolnshire (one of the witnesses to this feoffment), cannot be accepted. The descent from Herbert son of Aubri has been worked out by Mr. W. H. B. Bird (*Genealogist*, N.S. xxxiii, 145), and is entirely different from that from the chamberlain. Another suggested identification with a Gloucestershire Herbert (*Trans. Bristol and Glouc. Arch. Soc.*, iv, 166) must also be rejected.

[4] For the chamberlains of William I, see *Regesta regum Anglo-Normannorum*, ed. H. W. C. Davis, i, p. xxiv. For the chamberlains in the Hampshire Domesday, see J. H. Round, *V.C.H. Hampshire*, i, 425.

[5] *Domesday*, i, 42 b, 45 b, and 48 b.

[6] Davis, *Regesta*, i, p. xxv.

[7] J. Armitage Robinson, *Gilbert Crispin*, 146, no. 27.

[8] The late twelfth-century chroniclers call him Herbert of Winchester. See p. 66, n. 1 *infra*.

[9] *Chron. of Abingdon*, ii, 43.

[10] J. H. Round, *The King's Serjeants*, 68, 121. T. F. Tout, *Chapters in the Administrative History of Mediaeval England*, i, 72.

thesaurarius Henrici regis,[1] which doubtless describes his functions correctly, for the *camera* and the *thesaurus* were still closely associated.[2] In official documents, however, his style is simply *camerarius* or *camerarius regis*. An interesting writ of Henry I which has been published by Dr. Armitage Robinson, and, he thinks, was probably issued on the occasion of the king's coronation at Westminster (Aug. 5, 1100), illustrates Herbert's connexion with the treasury. It is addressed to Eudes the steward (*dapifero*) and Herbert the chamberlain, and orders that the convents of Westminster, Winchester, and Gloucester, at all festivals at which the king shall be crowned in these churches, shall have full livery from the king, and their precentors shall have an ounce of gold.[3] Dr. Round has explained that the writ was addressed to the steward because he would have charge of the *liberacio*, and to the chamberlain because he would be responsible for finding the ounce of gold.[4]

Herbert appears in the long list of magnates of the realm and officers of state who attest three charters of Henry I issued at Windsor on Sept. 3, 1101, two to the cathedral church of Norwich,[5] and one to the church of Bath.[6] He attests, after Queen Matilda and Roger the chancellor, a charter of Henry I to Abingdon, issued at Windsor[7] [1101–1102],[8] and a royal writ in favour of abbot Faricius of Abingdon[9] is addressed to Roger the bishop, Herbert the chamberlain, and Hugh of Buckland, then sheriff of Berkshire [1102–1116]. In 1110 a notification by Henry I of a grant to the old minster at Winchester[10] is addressed to William of Pont-de-l'Arche the sheriff, Herbert the chamberlain, and Henry de Port. Another charter of Henry I to Winchester is addressed to the bishop, the sheriff, and Herbert the chamberlain; and a third, issued at Winchester, is addressed to Herbert, Henry de Port, William of Pont-de-l'Arche, &c.[11] A charter of Henry I to Salisbury, issued at Winchester,[12] is attested by Herbert, after William bishop of Winchester and Ralph the chancellor [1110–1122].

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[1] See p. 66, n. 1 *infra*.

[2] T. F. Tout, *op. cit.*, i, 74 ff.

[3] J. A. Robinson, *Gilbert Crispin*, 141, no. 18.

[4] J. H. Round, *The King's Serjeants*, 324.

[5] *Mon. Angl.* iv, 15 (no. 3), 16 (no. 5). W. Farrer, *Outline Itinerary of King Henry I* (1919), nos. 25 and 26.

[6] *Two Chartularies of Bath Priory* (Somerset Record Society, vii), no. 40, p. 43. Farrer, *Itinerary*, no. 28.

[7] *Chron. of Abingdon*, ii. 52. Farrer, *Itinerary*, no. 41.

[8] The limits of date indicated within square brackets are those assigned by Dr. Farrer in his *Itinerary*.

[9] *Chron. of Abingdon*, ii, 113. Farrer, *Itinerary*, no. 274.

[10] *Cal. of Charter Rolls*, iii, 351. Farrer, *Itinerary*, no. 262.

[11] *Eng. Hist. Rev.*, xxxv, 393 [1107–1123].

[12] *Reg. of St. Osmund*, i, 208. Farrer, *Itinerary*, no. 429.

The Abingdon chronicler relates how, during one of the king's absences in Normandy,[1] abbot Faricius obtained a decision in his favour of a dispute about one of his manors, at a court held by Queen Matilda in the castle of Winchester, *in thesauro*.[2] The queen's writ announcing the decision of the plea gives the names of the bishops and barons who formed the court, and Herbert the chamberlain is among them.[3]

Herbert the chamberlain appears prominently in the Survey of Winchester of the time of Henry I, the manuscript of which is a cherished possession of the Society. Dr. Round dates the Survey as not earlier than 1103, nor later than 1115, and is inclined to assign it to the latter half of these twelve years.[4] The officials charged with its superintendence were the bishop of Winchester, Herbert the chamberlain, and three other trusted officers of the king. The Survey itself shows that Herbert held at least a dozen houses within the city and outside the West Gate, in addition to some land. Of the king's demesne he held four houses on the north side of High Street, viz. one (*mansura*) a little within the East Gate, rent 15s.;[5] one probably between 'Buccestret' (now Busket Lane) and 'Tannerestret' (Lower Brook Street), rent 61s.;[6] west of the 'domus Godbiete' (which was at the corner of St. Peter's Street), a house, rent £7 15s.,[8] one of the three or four highest rents to be found in the Survey; and a house near the end of 'Bredenestret' (probably Staple Gardens), held under William d'Aubigny, rent 72s.[7] On the north side of High Street also, a little within the West Gate, there was a market 'by the three minsters, which used not to be there T. R. E.', which is on the land of the abbot and of Herbert the chamberlain.[8] This last was either near, or the same as, the 'inland' which Herbert held of the fee of the bishop of Winchester, the rent of which was £7 11s.[9] On the south side of the western part of High Street, Herbert held of the king's demesne a house, the rent of which was 60s.[10] He also held something in 'Bredenestret'.[11] In the suburb which extended outside the West Gate he held two houses, one with a rent of 22s.,[12] and another 'within the second ditch'.[13] The house in which Herbert himself lived—which would be conveniently near the treasury in the castle—must, I think, have been one of those which were

[1] Either between July 1108 and the end of May 1109, or between August 1111 and the summer of 1113 (Round, *Feudal England*, 142). Dr. Farrer's indication is Aug. 1111–July 1113.

[2] Orderic (iv, 87) speaks of Henry in 1100 hastening 'ad arcem Guentoniae, ubi regalis thesaurus continebatur'.

[3] *Chron. of Abingdon*, ii, 115. Farrer, *Itinerary*, no. 323.

[4] J. H. Round, *The Survey of Winchester temp. Henry I*, in *V. C. H. Hampshire*, i, 527 ff.

[5] *Domesday Book* (Rec. Com.), iv (*Additamenta*), 531 b.

[6] *Ibid.*, 532 a.   [7] *Ibid.*, 532 b.   [8] *Ibid.*, 533 a.

[9] *Ibid.*, 535 a.   [10] *Ibid.*, 533 b.   [11] *Ibid.*, 538 a.

[12] *Ibid.*, 536 b.   [13] *Ibid.*, 537 a.

held T. R. E. by Godeman, Luteman, and Edwi, for this entry of Herbert's holding is immediately followed by the statement that 'before the gate of Herbert the chamberlain was waste land on the ditch T. R. E. Now there are five houses', three of which yielded small rents to the chamberlain, the fourth was a laundry, and the fifth 'a hospital, *pro amore dei*'.[1] A house on the south side of High Street was held of the king's demesne by Ranulf, the steward (*dapifer*) of Herbert the chamberlain,[2] and Ralph, the 'man' of Herbert the chamberlain, is entered as holding in 'Gerestret'[3] (now Trafalgar Street).

To return to Herbert's Yorkshire acquisition, a guess may be hazarded as to the time when the grant by archbishop Thomas was made. Herbert's numerous holdings in Winchester prove that he was a man of considerable means. The chroniclers tell us that his son William, the future archbishop, was brought up in luxury and riches[4], and one of the charges which was made against him when he was elected archbishop was that he had misused his riches to obtain his election.[5] The Abingdon chronicler relates a story which illustrates Herbert's eagerness to acquire land. During the vacancy between the death of abbot Rainald in 1097 and the election of abbot Faricius in 1100, the revenues of the abbey were received by Motbert the provost, on behalf of the king. Some question had arisen about the abbey's holding of Leckhampstead (10 hides), and Herbert, *regis cubicularius et thesaurarius*, was consulted, and was holding *in commendam* these and other lands of the abbey pending a settlement.[6] A writ of Henry I [1100–1101] directed Hugh of Buckland, sheriff of Berkshire, to go to Abingdon and put the monastery in possession of lands which Motbert had dealt with irregularly, including what was then in Herbert's possession.[7] The chronicler relates with much disgust how this man 'plotted against the church and the abbot' to retain what he held, and how, after much importunity he eventually agreed to give up the other lands, but induced the abbot to give him a grant of Leckhampstead for one mark of silver,[8] to be held for the service of one knight.[9] A list of the knights of Abingdon shows that Herbert son of Herbert held 10 hides in Leckhampstead for one knight's fee.[10]

[1] *Domesday Book* (Rec. Com.), iv (*Additamenta*), 536 b.

[2] *Ibid.*, 534 a.   [3] *Ibid.*, 542 a.

[4] See p. 66, n. 1 *infra*.

[5] St. Bernard wrote to Pope Innocent II: 'Archiepiscopus Eboracensis venit ad vos, . . . homo qui non posuit Deum adjutorem suum, sed speravit in multitudine divitiarum suarum' (*Ep.* 346).

[6] *Chron. of Abingdon*, ii, 42-3.

[7] *Ibid.*, ii, 86. Farrer, *Itinerary*, no. 17.

[8] Domesday records the abbey's holding in Leckhampstead of 10 hides, which, together with 4 hides in Weston and 2 hides in Boxford (16 hides in all), were valued at £10, both T. R. E. and T. R. W. (*Domesday*, i, 58 b). Little wonder that the chronicler was dissatisfied with the bargain!

[9] *Chron. of Abingdon*, ii, 134.   [10] *Ibid.*, ii, 5.

So much for the circumstances and disposition of one of the parties to the Yorkshire transaction. Turning now to the other side, we learn that, after Thomas had been elected archbishop[1] and had been welcomed at York, he set out for Winchester to speak to the king about the profession of obedience to Canterbury which he expected that Anselm would demand. He was favourably received by the king,[2] and then proceeded with the usual wrangle with Canterbury. Anselm had written to Thomas to come to Canterbury for consecration on September 6. In the letter which Thomas wrote him in reply, excusing himself for not coming, he says, 'all the money, a large sum in proportion to my means, which I had raised in order to come to you, I spent at Winchester, from which I had intended to make a quicker departure and come to you, but stayed there longer than I had expected, and much too long.' He says that he begged, and was still begging, money for this purpose, but could obtain scarcely any without paying heavily for it, because his predecessor had greatly impoverished the see.[3] As Thomas had been the king's chaplain, he must already have been acquainted with the chamberlain, and there can be little doubt that the two would meet at Winchester—the impecunious archbishop, trying to raise money, and the wealthy chamberlain, ready to acquire property on advantageous terms.[4] It is a tempting conjecture that the feoffment of the Yorkshire lands, which was a very considerable grant, was arranged during this visit of the archbishop to Winchester in the summer of 1108. And it is something more than a conjecture that it was this transaction which first introduced Herbert's son William to the church of York, of which he became the treasurer.

Herbert was dead by 1130, as appears from the Pipe Roll of that year, which shows that he had held lands in Hampshire, Bedfordshire, and Yorkshire. An entry under Hampshire shows that his son Herbert had paid 90 marks of silver, on account of 353 marks, for the land of his father, leaving 263 marks still owing.[5] An entry under Yorkshire records that 'Givard', the man of Herbert the chamberlain, rendered account of £8 6s. 8d. for a money plea of the wife of Herbert, on account of which £4 had been paid.[6] Two other entries show that two of Herbert's daughters had married into Hampshire families founded by two of the Conqueror's officers, Croc the huntsman and Geoffrey

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[1] Archbishop Gerard died 21 May 1108. Thomas was immediately elected as his successor.

[2] Before August the king crossed to Normandy.

[3] Eadmer, *Historia Novorum in Anglia* (Rolls Series), 200.

[4] In his *carta* of 1166, Roger, archbishop of York, explained the excessive number of his knights by the statement that his predecessors had in this way provided for their relatives and servants (*Liber Niger*, ed. Hearne, 304. *Red Book of the Exchequer*, 413. J. H. Round, *Feudal England*, 301).

[5] *Pipe Roll 31 Hen. I*, p. 37.

[6] *Ibid.*, p. 25. See also pp. 32 and 104.

the marshal, both of whom appear as tenants-in-chief in the Hampshire Domesday. William Croc rendered account, under Berkshire, of 200 marks of silver and 2 marks of gold for the daughter of Herbert the chamberlain, of which only 20 marks had been paid.[1] Robert de Venoix, who was the heir, and probably the son, of Geoffrey the marshal,[2] had paid 16s. 8d. in Hampshire for the daughter of Herbert the chamberlain, with her dower.[3] Herbert seems to have given this daughter a part of his Domesday manor of Soberton on her marriage with Robert de Venoix.[4]

I have hitherto assumed that the Herbert the chamberlain of the Hampshire Domesday is the same Herbert the chamberlain who was dead in 1130, but it may be prudent to add a word of caution. It is perhaps somewhat rash to suggest a definite conclusion where two such authorities as Dr. Round and Prof. Tout have hesitated.[5] But the dates—1086 to c. 1129—are not impossible. Herbert's son was old enough to share with his father the archbishop's feoffment by 1114 at latest, if not, as I have ventured to suggest, by 1108. Our chamberlain is always called 'Herbert' simply, never 'Herbert son of Herbert', as his son and grandson almost invariably are,[6] and there does not seem to be anything in the records which I have quoted to suggest that we ought to assume two distinct persons.

Of Herbert's other children, it is necessary here to speak only of his sons, Herbert his heir and William the future archbishop. Herbert occurs as *camerarius regis* in several entries in the Winchester survey of 1148.[7] He married Sibil (or Adela, or Lucia), the daughter of Robert Corbet, the Domesday baron; she was one of the numerous mistresses of Henry I, and by him the mother of Reginald de Dunstanville, afterwards earl of Cornwall.[8] The Weaverthorpe and Londesbrough lands granted to Herbert and his father by archbishop Thomas passed to his direct descendants in the male line until the middle of the fourteenth century.[9]

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[1] *Pipe Roll 31 Hen. I*, p. 125.
[2] J. H. Round in *V. C. H. Hampshire*, i, 431. *The King's Serjeants*, 89.
[3] *Pipe Roll 31 Hen. I*, p. 37.
[4] *V. C. H. Hampshire*, iii, 260.
[5] J. H. Round in *V. C. H. Hampshire*, i, 529, 534. T. F. Tout, *op. cit.*, i, 76.
[6] Henry II's charter of 1155 to his grandson Robert fitz Herbert granted him *ministerium patris sui de cameraria mea . . . sicut pater suus vel avus suus liberius tenuerunt* (Eyton, *Antiquities of Shropshire*, vii, 150). The bishop of Winchester's *carta* of 1166 speaks of Herbert, son of Herbert, son of Herbert *camerarii senioris* (*Liber Niger*, 69. *Red Book of the Exchequer*, 205).
[7] *Domesday*, iv, 542 b, 543 a, 558 a, b.
[8] Eyton, *op. cit.*, vii, 145, 181.
[9] See the pedigree and account of the family in Eyton, *op. cit.*, vii, 146 ff. Herbert fitz Herbert II (the grandson of 'Herbert of Winchester'), who married the daughter of Milo of Hereford, held the three knights' fees under the archbishop of York (*Liber Niger*, 304. *Red Book of the Exchequer*, 413),

Herbert's brother William, son of the elder chamberlain, was a much more conspicuous figure in the history of his time. The continuator of Hugh the Chanter speaks of him as the son of Herbert of Winchester, the chamberlain and treasurer of King Henry, and says that he was nurtured always in luxury and riches, and was but little inured to toil; nevertheless, he was very popular for his kindness and simplicity of heart and for his generosity.[1] William of Newburgh says that he was of noble birth.[2] The statement, repeated in most modern histories, that he was a nephew of King Stephen and of Henry of Blois is rejected by Professor Tout for the very sufficient reason that, although the most nearly contemporary writers speak in some detail of William's dealings with Stephen and his brother Henry, they do not say a word of his relationship to the king.[3] Gervase of Canterbury says that Stephen gave the archbishopric of York to 'a certain clerk, William by name ',[4] and the Winchester annalist who tells of his stay with bishop Henry at Winchester during the years of his deprivation, gives no hint of any relationship to the bishop.[5] On chronological grounds, too, such a relationship seems almost impossible. The legend seems to make its first appearance in an anonymous life of St. William, the MS. of which dates from the second half of the thirteenth century, where William's father becomes 'the most strenuous count Herbert', and his mother an otherwise entirely unknown Emma, sister of King Stephen.[6] This life was evidently

in addition to his holdings in Hampshire, Wiltshire, Berkshire, and Gloucestershire. The Great Inquest of Service of 1212 shows his son Peter fitz Herbert as holding the three knights' fees (*Red Book of the Exchequer*, 492), which his son Reginald fitz Peter is also recorded as holding (*Kirkby's Inquest* (Surtees Soc. xlix), pp. 79, 389. *Yorkshire Inquisitions* (Y. A. S. Rec. ser. xxiii), ii, 46). His son John fitz Reginald did homage to archbishops Newark and Corbridge for the three fees, and his son Herbert fitz John to archbishop Greenfield (*Kirkby's Inquest* volume, pp. 400, 404, 410). Herbert's son Matthew fitz Herbert did homage to archbishop Melton for three and a half fees (*ibid.*, 414). Matthew died in 1356 (*Cal. Inq.*, x, 267), and Weaverthorpe and Londesbrough passed to Edward St. John, and through him to the Bromfletes and Cliffords. It will be noticed that the members of this family did not use 'Fitzherbert' as a surname. Their chief interests did not lie in Yorkshire, where they held little if anything more than archbishop Thomas granted to Herbert, until they acquired the manor of (Market) Weighton by the marriage of Reginald fitz Peter with Joan de Vivonia.

[1] 'Fuerat enim filius Herberti Wintoniensis camerarii et thesaurarii Henrici regis. Enutritus est semper in deliciis et divitiis, et raro labori assuetus, benignitate tamen animi innocentis et liberalitate [plebi, *J. of H.*] valde carus' (*Historians of the Church of York*, ed. Raine, ii, 223). The same passage occurs in John of Hexham (in *Symeon of Durham*, ed. Arnold, ii, 317), except that Herbert is there called *thesaurarius* only.

[2] 'Willelmus eiusdem ecclesiae thesaurarius; vir plane et secundum carnem nobilis, et morum ingenua lenitate amabilis' (*Historia Rerum Anglicarum*, i, 55).

[3] T. F. Tout, in *D. N. B.*, under Fitzherbert, William.

[4] *Gervase* (ed. Stubbs), i, 123.

[5] *Annales Monastici* (ed. Luard), ii, 54.

[6] 'Beatus igitur Willelmus ex spectabili prosapia regis illustris Anglorum Stephani ortus, praeclaris natalium titulis fuerat insignitus. Erat enim filius strenuissimi comitis Herberti, viri

compiled after William's canonization in 1226, and the statement of a royal mother may be rejected as mere hagiographical embroidery.

There can be little doubt that it was Herbert's acquisition in Yorkshire that led to his son's connexion with the church of York, though it might perhaps be unduly rash to suggest that William's appointment as treasurer was part of the bargain which his father made with the archbishop. If, however, we can trust the evidence of two Selby charters, it would seem that William must already have been appointed treasurer by the last year of archbishop Thomas,[1] though this would give him some twenty-eight years of office before he was elected archbishop. He was archdeacon of the East Riding for at least nine years before his election as archbishop.[2]

The charter evidence of Herbert and William's gift of the church of Weaverthorpe to Nostell priory would seem to indicate that their father handed over to them his Yorkshire lands some years before his death, probably after he had reorganized the estate on an economic basis and built the church. Herbert's grant says that the church was first given to the canons of Nostell by his brother William, treasurer of York, with the consent of archbishop Thurstan,[3] and both this grant and its confirmation by the archbishop[4] are placed by Dr. Farrer within the limits 1114-21. The notification by Henry I of his confirmation of this gift by Herbert fitz Herbert and his brother William the treasurer is attested by archbishop Thurstan and by William de Tancarville[5] who died in 1129. There is also a confirmation by King Stephen to William the treasurer of York, the king's chaplain, of the churches which he holds of the fee of his brother Herbert, including Weaverthorpe and Londesbrough, to hold them freely and well, as his father and Herbert his brother gave them to him, and as the charter of Henry I testifies.[6] William confirmed this gift after he became archbishop.[7]

William's career after his election as archbishop of York in 1142 belongs to general history. There is no doubt that he owed his election to the influence

secundum caducos huius mundi honores potentissimi, ex Emma sorore praedicti regis' (*Historians of the Church of York*, ii, 270). This is copied by the late chroniclers, Bromton (*X Scriptt.* col. 1029, 1040) and Thomas Stubbs (*Hist. Ch. York*, ii, 389), who can scarcely be regarded as reliable authorities for the twelfth century.

[1] Archbishop Thomas and William the treasurer attest a grant to Selby, and William the treasurer attests the archbishop's confirmation of the same grant (*Chartul. of Selby*, i, 290, 299. Farrer, *Early Yorkshire Charters*, i, nos. 45 and 46).

[2] Farrer, *Early Yorkshire Charters*, ii, nos. 1151 and 1153.   [3] *Ibid.*, i, no. 26.

[4] *Ibid.*, i, no. 27.   [5] *Ibid.*, iii, no. 1439.

[6] *Ibid.*, i, no. 31 [1136-9]. *Mon. Angl.*, vi, 1196, no. 110. Eyton's date is 1136 (*Ant. of Shropshire*, vii, 147).

[7] Farrer, *Early Yorkshire Charters*, i, no. 28. In the thirteenth century the church of Weaverthorpe passed from Nostell priory to the church of York.

of the court. The son of a court official, he was himself a king's chaplain, as indeed were all his predecessors in the see of York since the Conquest. The principal ground of complaint by his opponents was that his election had been procured by the undue influence of the king; the charge of bribery was merely secondary. The reform party in the church, headed by the Cistercians, with the powerful aid of St. Bernard, had their opportunity in the distracted state of the country under a feeble king, and for five years they opposed William's election with extraordinary virulence. William, indeed, was unfortunate in his partisans. Although he was doubtless unfitted for the position, he was a kindly easy-going person, entirely undeserving of St. Bernard's description of him as *turpis infamisque persona*.[1] Even the Cistercian chronicler of Fountains admitted that he was worthy enough of the see if he had been canonically elected.[2] It is interesting to see how, in this troublous period of his career, he turned to Winchester, his old home. After the first appeal to the pope, he was consecrated at Winchester by bishop Henry in 1143. The election of a Cistercian pope in 1145 enabled St. Bernard to effect his purpose, and William was first suspended, and eventually, after the violent attack on Fountains by his partisans, he was deposed in 1147. On his return to England after his deposition, he took up his abode at Winchester with bishop Henry, who received him hospitably, 'on account of his holiness and because he had ordained and consecrated him.'[3] He remained at Winchester until the deaths in 1153 of the pope, of St. Bernard, and of his successor, archbishop Murdac, paved the way for his reinstatement. On his return to England after he had received the pall from the new pope, he kept the Easter festival of 1154 at Winchester,[4] before he returned to York. But he was not destined to enjoy his honours for long (died 8 June 1154). His generous character and the sufferings which he had undergone appealed to the popular imagination. The church of York had long been under the disadvantage of possessing no such famous saints as St. John of Beverley, St. Wilfrid of Ripon, and St. Cuthbert of Durham, and the miracles recorded to have been wrought at William's tomb enabled York to supply its need by his canonization in 1226.[5]

To sum up. Weaverthorpe church can claim an important place in the architectural history of Yorkshire as a nearly unaltered building of authenticated date. It follows in the main the new manner of building introduced by the Norman conquerors, but it shows some indications of overlap in style in its

[1] *Ep.* 235.
[2] *Memorials of Fountains* (Surtees Soc. xlii), i, 80.
[3] *Annales Monastici*, ii, 54.
[4] 'In Paschali solennitate alumpnam suam Wintoniensem ecclesiam visitavit' (*Gervase*, i, 158).
[5] *Historians of the Church of York*, iii, 127.

retention of some pre-Conquest characteristics, including the dial which fortunately enables us to identify its builder and date. The church, too, has a special interest as one of the earliest surviving examples of the church architecture of the period of reconstruction in this devastated district.

Indeed it is not often that a remote village church connects itself with recorded history at so many points. At the time of the Conquest, Weaverthorpe and its dependencies were held by Ealdred, the last of the English archbishops, who died on the eve of the Conqueror's harrying. His successor, who held it when William took his terrible vengeance, was the Thomas of Bayeux who owed his advancement to Odo, the Conqueror's militant brother. It was this Thomas's nephew, the second archbishop Thomas, who granted Weaverthorpe to the royal official who built the church in the course of his development of his impoverished estate. And it was doubtless to this grant that his son William owed his first introduction to the church of York, of which he became archbishop. So Weaverthorpe church may be regarded as the visible memorial of the transaction which eventually gave to York its long-desired saint.

APPENDIX

The Domesday Evidence of 'Waste' on the Northern Wolds.

The T. R. W. value for the whole county of York is about one-third of the T. R. E. value. The T. R. W. value of the North Riding is about 20 per cent. of the T. R. E. value; of the East Riding, about 27 per cent.; and of the West Riding (excluding York and 'near the city'), about 46 per cent.[1]

The greater part of the *waste* area mentioned above (p. 52) lies within the Hundreds of 'Toreshou' and Burton. In Burton Hundred the T. R. W. value is about 4 per cent. of the T. R. E. value; in 'Toreshou' Hundred it is only 1·6 per cent., which is the lowest percentage of any Hundred or Wapentake in the county except Allertonshire.[1]

This *waste* area is bounded on the north by the river Derwent, and lies within the following places, all of which have population recorded and actual ploughs stated (except Burton Agnes and Bridlington, where no ploughs are mentioned): Settrington, North Grimston, Birdsall, Acklam, Garrowby, Warter, North Dalton, Hutton Cranswick, Nafferton, Lowthorpe, Burton Agnes, Carnaby, Bridlington, Buckton, and Hunmanby.

Within the fringe of this area, four vills have recorded population and ploughs, viz. Wintringham (18, 8), Duggleby (7, 3), Garton (7, 4), and Rudston (5, 2).[2] These are not included in the total below.

The following are also excluded: 3 car. in Greenwick and $4\frac{7}{8}$ car. in Fridaythorpe, both berewicks of Bishop Wilton; 1 car. in Wharram Percy rendering 10s.; $1\frac{3}{4}$ car. in Kirkby Underdale worth 2s.; $4\frac{1}{2}$ car. in Hanging Grimston rendering 3s.; and 4 car. in Caythorpe worth 8s.

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[1] See the table of statistics in *V. C. H. Yorkshire*, ii, 189.

[2] The first of the figures within brackets represents the recorded population, and the second the actual ploughs.

The berewicks of Langton, lying in East Heslerton (3 car.), Sherburn (9 car.), Burdale (6 car.), and Raisthorpe (1 car.) are included, because the indications are that the recorded population and ploughs were in Langton and its adjoining berewick of Kennythorpe, rather than in these more distant berewicks.

To the manor of Bridlington belonged the soke of lands in 14 vills, assessed at 58½ carucates and 30 teamlands, in which there were three villeins and one sokeman, with one plough and a half, the rest being waste. The lands in nine of these vills (42½ car.) are included in the total below.

To the manor of Weaverthorpe belonged the soke of lands in seven vills, assessed in all at 20½ carucates, in which there were two sokemen and three bordars, with one plough, rendering 10s. The lands in four of these vills (14 car.) are included in the total below, because the indications are that it was the three other vills (North Grimston, Sutton, and Birdsall) which were cultivated.

The *waste* area so defined includes 76 vills, assessed at 724⅜ carucates. In some cases the teamlands are not stated, but calculating these on the basis of the average proportion (to carucates) for each individual Hundred, the estimated agricultural capacity of the whole area works out to about 420 ploughs. Neither inhabitants nor plough-teams are recorded in the whole area.

The total of 724⅜ carucates is made up as follows:

    422   carucates definitely described as *waste*.
    143⅜ carucates in the hands of the king; no *valet* stated, doubtless because they were
            derelict.[1]
    20¾ carucates, no *valet* stated.
    63   carucates in the summary, but not in the text.
    19   carucates in berewicks of Langton (as above).
    42½ carucates in soke of Bridlington (as above).
    14   carucates in soke of Weaverthorpe (as above).
    ———
    724⅜

[1] Dr. Farrer in *V. C. H. Yorks.*, ii, 146, 185.

V.—*Irish Bronze Pins of the Christian Period.*
By E. C. R. ARMSTRONG, *Esq., F.S.A.*

Read 23rd March 1922.

A CLASSIFICATION of the numerous bronze pins found in Ireland is to be desired. Wilde,[1] who figured over thirty specimens of various kinds, made no separation between Bronze and Early Iron Age pins and those of the Christian period. Coffey[2] devoted some pages to pins, reproducing a number of Wilde's illustrations; he did not, however, attempt any classification, merely stating that, with the exception of the 'hand-type' and other pins of that class showing decoration earlier than the interlaced style, the approximate date of the majority might be taken as the tenth to the eleventh century.

Bronze Age pins with ornamented, or plain, disc-heads placed at right angles, or parallel, to the stem are common in Ireland, specimens with cup-shaped heads being known. Long pins with a side-loop and flat disc-head are also represented. Examples of richly decorated Irish pins of the pre-Christian Iron Age have been illustrated by Mr. Reginald A. Smith, F.S.A.,[3] in his essay applying the typological method to the evolution of the hand-type pin.

The successful results obtained by Mr. Smith from the use of typology in the case of the Irish hand-type pins, and particularly in his classification of Irish brooches,[4] have led to the present paper, which I have had the advantage of discussing with Mr. Smith, to whom I am indebted for helpful suggestions. Coffey's proposed date, i.e. the tenth to the eleventh century, is for the majority of the pins certainly too late.

The examination of the large series in the Irish National collection has led to interesting results; it has not, however, been possible to arrange the pins in a complete chronological sequence: certain types seem to merge into others,

[1] *Catalogue Royal Irish Academy Museum*, 1861, pp. 554-63 and 581-90.
[2] *R. I. A. Celtic Christian Guide*, 1910, pp. 33-6.
[3] *Oscari Montelio*, p. 283: see also the pin figured in *Galway Archaeological Journal*, xi, p. 76.
[4] *Archaeologia*, lxv, pp. 223-50.

and varieties of pins appear to have been in contemporary use. The most promising method of attacking the question of date is to link up the pins with penannular brooches, for, though the ages of the latter are not strictly determined, they are considerably better dated than the former; Mr. Smith, in his paper above referred to, having brought together and edited the available evidence on the subject. The earliest of the Christian pins appear to belong to the fifth or sixth century, while the latest may probably be placed in the tenth.

A large number of bronze pins has been found in early inhabited sites: crannogs, raths, sand-hills, settlements, etc. Unhappily, such finds give little clue to the date of the various types; the crannogs, from which the greater number have been derived, contain remains belonging to widely different periods, while so imperfectly observed have been the occupation levels at which the various antiquities were discovered, that it is not possible to form precise conclusions as to the dates of pins so derived.[1] The same remarks apply to the few Irish raths that have been excavated; also to the sand-hill settlements. That so few pins have been found in graves is doubtless because, apart from the lack of systematic excavation, those with which we propose to deal belong to the Christian period, when it was no longer the general practice to deposit objects with the dead. The pins that have been found in graves may be referred to Norse settlers in Ireland, who probably were unconverted to Christianity.

It seems, therefore, that in the majority of cases the dating of Irish pins must rest upon stylistic grounds and we may begin our study with a series of small pins having their heads decorated with a triskele, their stems being sometimes incised with linear and spiral ornament (fig. 1, nos. 1–6). Wilde illustrated a pin of this type, but his figure does not show the triskele on the pin's head. These pins show no trace of interlaced decoration, their ornamentation being derived from that of the pre-Christian La Tène period. The cross with expanded arms incised upon the stem of one specimen (fig. 1, no. 3) indicates, however, that they belong to the Christian period. Crosses are also to be seen on the terminals of some penannular brooches.[2] The triskele pins may be placed early in the series; they cannot well be considered later than the fifth or sixth century. The use of this motive is an instance of the Celtic love of the number three[4] surviving into the Christian period.

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[1] See, for example, the account of the bronze pin figured as found in Killyvilla crannog (D'Arcy, *Journ. Roy. Soc. Ant. of Ireland*, xxvii, p. 218).

[2] *Op. cit.*, p. 555, fig. 437.

[3] Smith, *Archaeologia*, lxv, p. 228; Coffey, *R.I.A. Celtic Christian Guide*, 1910, p. 22.

[4] See on this subject Déchelette, *Manuel d'Archéologie*, iii, pp. 1527–30.

In a related type of pin (fig. 1, nos. 7-10) which appears to have been developed from the above, the spiral ends of the triskeles have broken down into concentric circles enclosing small round depressions which serve as set-
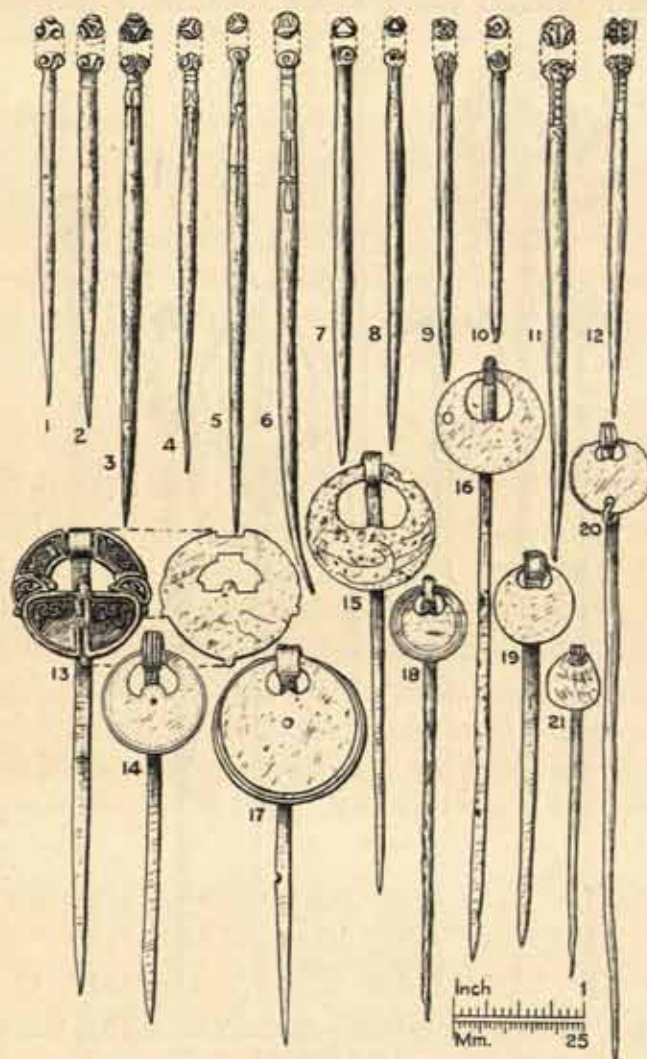

Fig. 1. Triskele, and disc-headed pins : nos. 4, 9, and 10 found near Christ Church Cathedral, Dublin ; no. 18 from one of the Strokestown crannogs, co. Roscommon.

tings ; in later forms the number of settings increases, the original form of the triskele becoming obscured and finally lost.

An example (fig. 1, no. 10) said to have been found in street excavations near Christ Church Cathedral, Dublin, one of whose settings still retains a small bead of amber, indicates that some at least of the depressions were thus filled.

At what seems to be a later stage in the evolution of the pin-heads (fig. 1, nos. 11 and 12) they are decorated with a large number of small holes which can hardly have been utilized for settings.

How long the development from the earliest triskele-headed pins to these forms may have taken is difficult to say, but if the former are placed in the fifth to the sixth century the latter may be of late sixth-century date.

A bronze ring-pin coated with white metal (fig. 2, no. 1), formerly in the
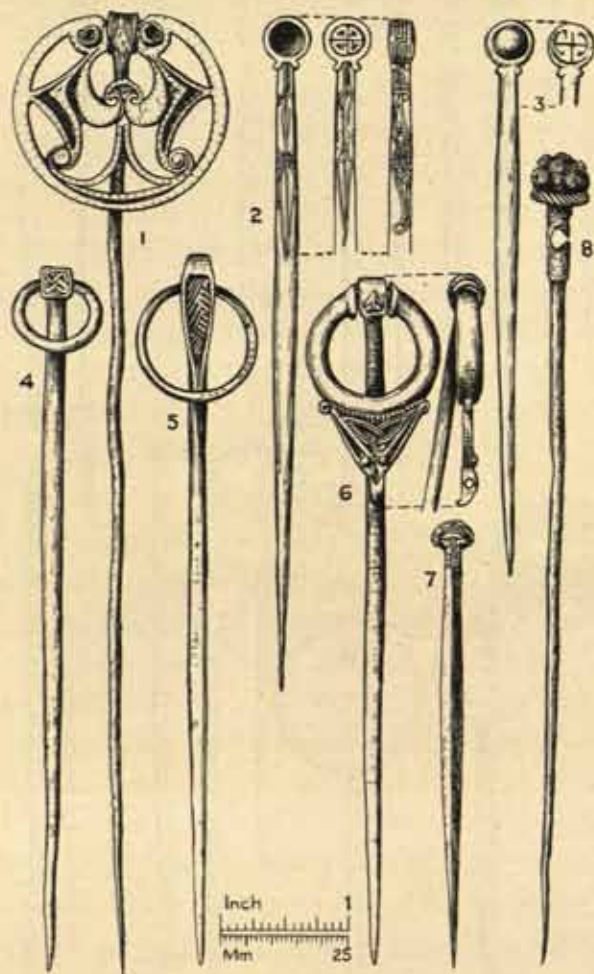
Fig. 2.   Miscellaneous pins ; no. 2 found at Clonmacnois, King's co. ; no. 8 at Drummiller Rocks, Dromore, co. Down.

Petrie collection, also seems to be of early date, for the ring is decorated with open-work ornamentation of La Tène character.   It is unfortunate that particulars as to the history of this pin, the only one of its kind in the collection, should be lacking.   Another small bronze pin, figured by both Wilde[1] and Wood-Martin,[2] found in Lagore crannog, the terminals of which are ornamented with spirals, may be considered as earlier than those with interlaced patterns only.

The remainder of the pins with which we propose to deal show no

[1] *Op. cit.*, p. 562.   [2] *Lake Dwellings of Ireland*, 1886, p. 109.

pre-Christian survivals; and it will possibly be convenient to consider next a common type of Irish ring-pin threaded by a double ring of wire. The appearance of such pins recalls the early penannular brooches of the so-called Welsh type, dated to the latter part of the fifth century, the hoops of which are often encircled by finely engraved lines, the terminals being ornamented with a diamond pattern. Both these features occur on the double-ringed pins, the rings of which are generally finely grooved, while the head is decorated with a diamond similar in form to that on the terminals of the brooches. A comparison of the pins shown on plate XII, fig. 1, nos. 6 and 9, with brooches figured by Mr. Smith[1] will make the similarity clear. Probably both pins and brooches were in contemporary use, though the former may have been the original models from which the pins were derived. A suggested date for double-ringed pins of this type would therefore be the early sixth century.[2]

An eccentric pin of this type (pl. XII, fig. 1, no. 1) is much broken: the lower part of its head is, however, ornamented with the characteristic diamond. In some examples a spade-shaped projection extends beyond the head of the pin: relationship of such pins to the simpler form is indicated by the diamond ornament on the head of the stem; but the type seems to be later, being probably affected by the pin-heads of such brooches as the Tara, Londesborough, and Hunterston.[3] Several pins similar to the example illustrated in plate XII, fig. 1, no. 9, were found in the Dunbell Raths, co. Kilkenny.[4] But the finds from these raths differ much in date, and exact particulars as to the occupation levels at which the various objects were discovered are not available. A pin found at Dunshaughlin crannog (pl. XII, fig. 1, no. 4) shows the double ring threading a bead of blue glass.

Unquestionably the most attractive pins are the highly decorated examples, shown on plate XII, figs. 2, 3, and 4. In these the hoop is large, only a narrow line dividing such pins from the smaller annular brooches. It will, however, be noticed that apart from settings of amber or enamel the decoration of the pins is, with the exception of a few examples which are also ornamented with human

[1] *Archaeologia*, lxv, 225, and pl. xxv, 1; also *Proc. Soc. Ant.*, xxvii, p. 96.

[2] A plain-headed pin with what is described as 'a double, or rather spiral, loop' is figured by Wakeman (*Journ. Roy. Soc. Ant. of Ireland*, xxi, pl. facing p. 543) as found in Lisnacroghera crannog, dated by swords to La Tène ii (Déchelette, *Manuel*, iii, p. 1122). I do not think reliance is to be placed on an isolated find of this kind, or that the pin is contemporary with the earlier objects found at Lisnacroghera. A similar pin was found in the excavations of the caves at Kesh, co. Sligo, with other remains of human habitation which did not, according to Coffey, indicate a date earlier than the eighth to the eleventh century (*Trans. Roy. Irish Academy*, xxxii, sec. B, pp. 210–12).

[3] See example figured in *Journ. Roy. Soc. Ant. of Ireland*, xxxix, p. 297. Sir Hercules Read has suggested that these pins may have been used for writing on wax, the head serving for erasing, while the ring would enable the pin to be attached to the person.

[4] *Ibid.*, ii, p. 119.

and animal forms, confined to interlaced work. Human heads occur on the Tara and Queen's brooch, associated in these cases with animal and spiral ornament. The general style of the pins agrees with that of a brooch found at Pierowall, Orkney, which there are good grounds for assigning to the beginning of the ninth century.[1] The specimen in the Irish National collection (pl. XII, fig. 2, no. 3) found in Woodford river, near Ballyheady Bridge, Kildallen, co. Cavan, is a favourite example; but other lesser known pins are worthy of attention.

Modelled upon brooches, these pins belong to the period when animal and spiral patterns had disappeared from the former, their ornamentation being then almost entirely confined to interlaced work.

It will be noticed that in some cases the settings on the pins are of amber, in others of enamel: many may probably date from the beginning of the ninth century. To trace an evolution of form among them is not easy, but attention may be directed to a few points. The projections round the hoop and terminals of plate XII, fig. 2, nos. 3 and 7, are a feature to be observed on brooches of the best period, i.e. the Tara, Hunterston, and Londesborough attributed to the eighth century. In plate XII, fig. 2, no. 5, the two raised lobes at either side of the central oval setting are reminiscent of the three-lobed decoration of such brooches as the Queen's and Dunshaughlin. In some cases the rings have small apertures at the base of the centre of the terminals to enable them to be more securely fastened. In two specimens (pl. XII, fig. 2, no. 4, and pl. XII, fig. 3, no. 3) the centre of the terminal finishes in a projecting animal's head seen from above. In one instance the snout of the animal ends in an attachment ring; in the other the ring is placed out of sight behind the animal's head; on this example (pl. XII, fig. 3, no. 3) may be noticed two human heads, and also at the side two birds, the beak, head, and neck of each being alone shown. This is the only pin of this type in the Irish National collection in which the ring is decorated with animal as well as interlaced ornament.

Mention may be made of two almost similar pins whose terminals are formed of animals' heads with wide-opened jaws grasping a diamond-shaped setting keyed for enamel (pl. XII, fig. 3, no. 5). Animals' heads with gaping jaws are frequently seen at the junction of the hoop and terminals of penannular brooches. In another example the animals' jaws grasp circles containing surfaces prepared for enamel; this pin closely resembles a silver annular brooch in the collection. A pin (pl. XII, fig. 4, no. 1) the back of which shows traces of tinning has the terminals decorated with a number of bosses resembling a cluster of grapes. Mr. Smith has sent me a photograph of a similarly decorated pin in

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[1] Smith, *Archaeologia*, lxv, p. 234.

Fig. 1. Double-ring-pins: 3 found at Rathcoffey, co. Kildare; 4 said to have been found with a brambled-headed ring-pin at Athlone; 5 from St. Columba's College collection; 7 found in Dunshaughlin crannog, co. Meath; 8 found near Ventry, co. Kerry.
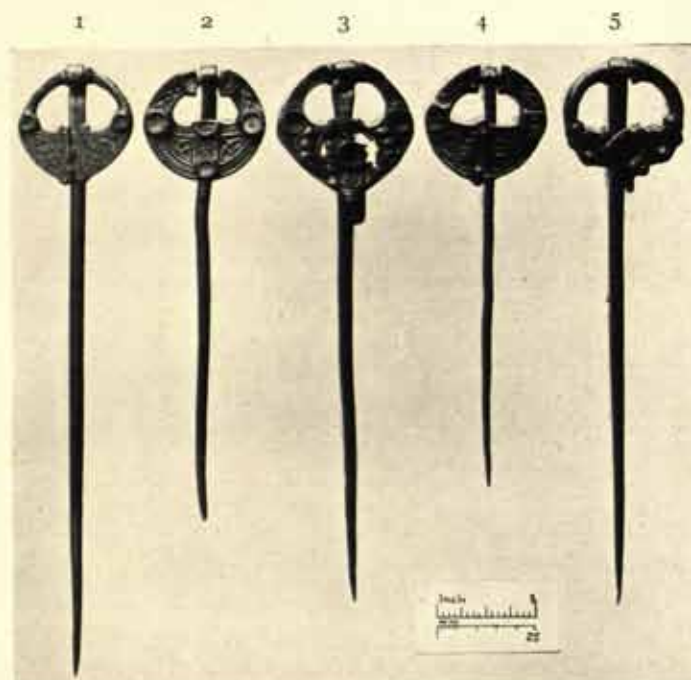

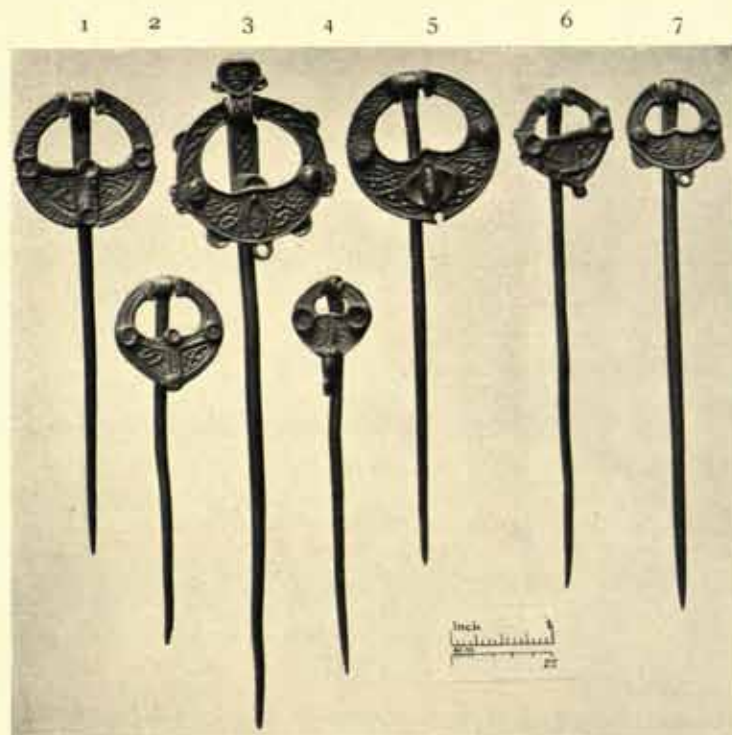Fig. 3. Pins modelled upon brooches: no. 3 found at Island Bridge, co. Dublin, in 1879.

Fig. 2. Pins modelled upon brooches: no. 2 found in Woodford River, near Ballyheady Bridge, co. Cavan; no. 5 found in Oghil Bog, Monasterevin, co. Kildare; 7 found in Ballinderry crannog, co. Westmeath.
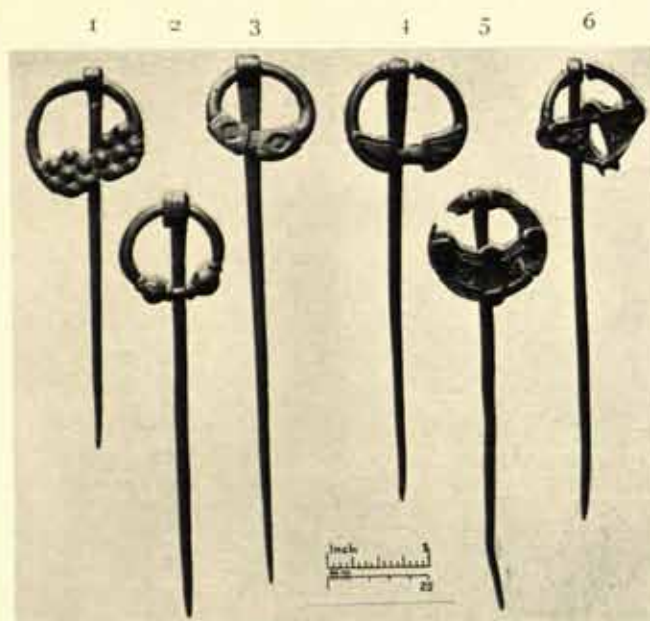
Fig. 4. Pins modelled upon brooches: no. 2 found at Killaloe, co. Clare; 3 from St. Columba's College collection.
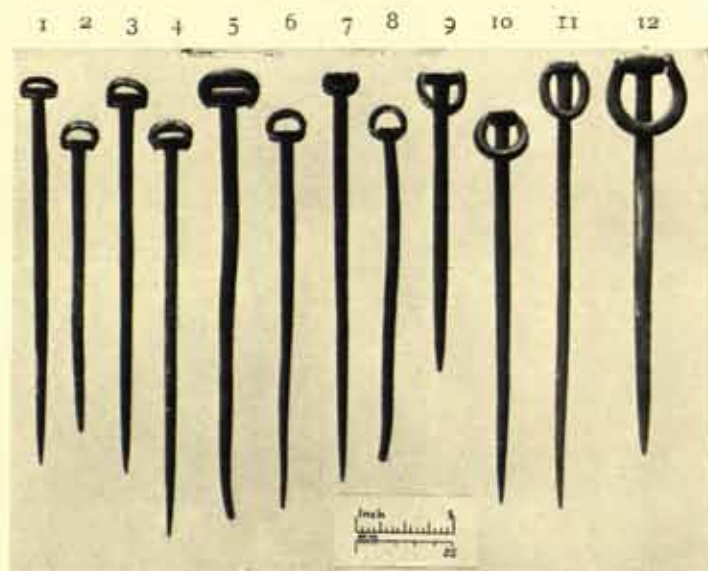
Fig. 1.   Crutch-headed ring-pins.
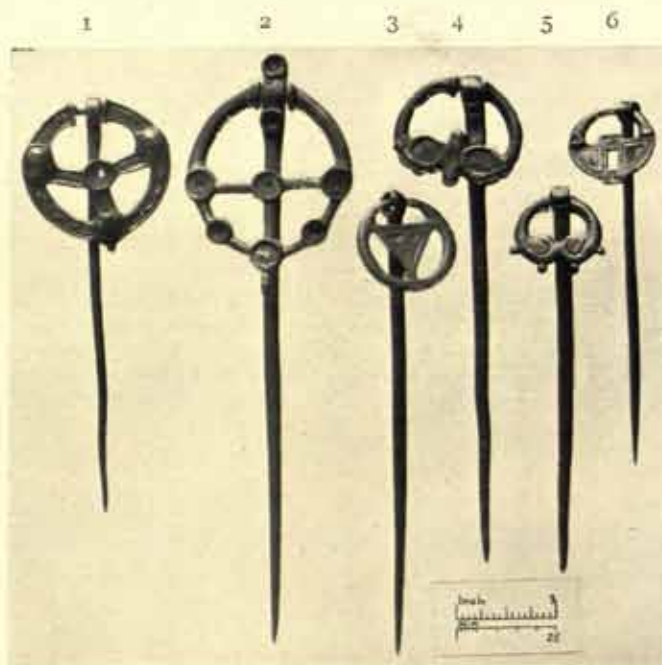
Fig. 3.   Ring-pins: no. 4 found in Dunshaughlin crannog, co. Meath.
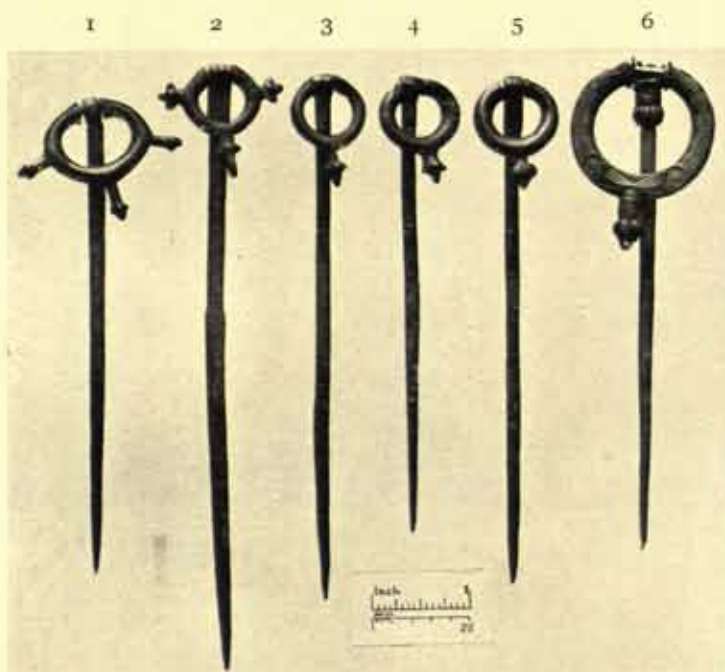
Fig. 2.   Ring-pins with projections: no. 3 found in Lagore crannog, co. Meath; no. 5 found in a drained lake near Newbliss, co. Monaghan.
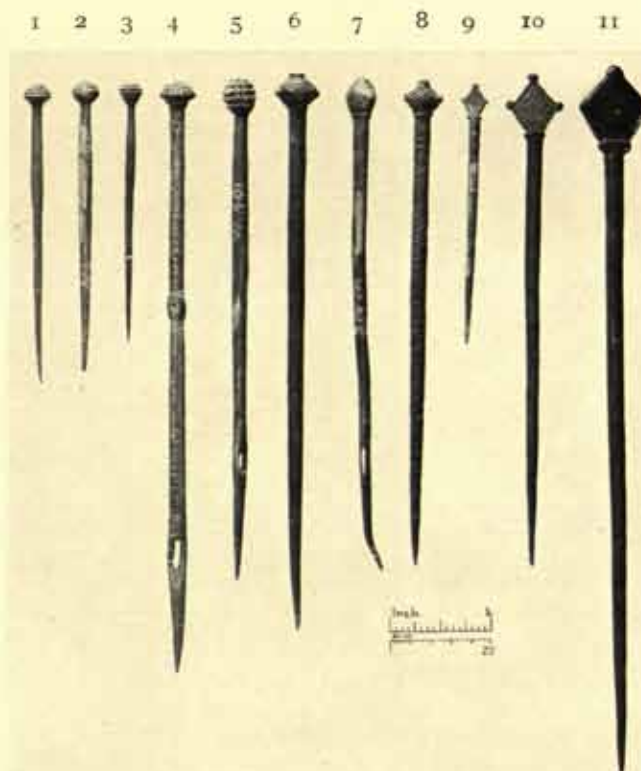
Fig. 4.   Brambled and cushion-headed pins: no. 4 found in main drainage works in Dublin; no. 8 found in foundations of St. Audoen's Church, Dublin; no. 10 found at New Grange, co. Meath.

the British Museum. Both bear some likeness to the small penannular brooch found at Rogart, Sutherlandshire, which is assigned to the beginning of the ninth century.[1] Two specimens have their terminals ornamented with plain spherical bosses (pl. XII, fig. 4, no. 2) recalling in appearance the same type of terminal on the tenth-century 'thistle' brooches, though in the case of the pins the bosses are plain. A few pins have their terminals ornamented with settings of blue glass; while the diamond pattern, keyed for enamel, makes its appearance on others. The specimen on plate XII, fig. 4, no. 3, greatly resembles a brooch found in the Trewhiddle hoard in Cornwall in 1774.[2] The deposition of this hoard can be dated about A.D. 875, so the latter half of the ninth century may be suggested as the date for the pin.

The coating of tin on the backs and in some cases the fronts of pins does not make its appearance on the specimens decorated with triskele ornament. It is, however, found on the backs of some early brooches, and it also occurs on Irish reliquaries, notably on the inner case of the *Domhnach Airgid* and the Lough Erne shrine.[3] Such bronze objects tinned or coated with white metal may represent the *findruine* so often mentioned in the early Irish tales.

Another type of pin, derived from the contemporary annular brooches, which exhibits progressive evolution is illustrated in what may perhaps be taken as its starting-point (fig. 1, no. 13). The head, which shows traces of tinning, has been decorated with imitation filigree work; the plain ground can be seen where it has scaled off. Resembling this example in form is an undecorated pin (fig. 1, no. 14). The illustrations (fig. 1, nos. 15–21) show the gradual deterioration of the type in which the aperture becomes reduced until the pin-head loses its brooch-like form, becoming a thin metal disc attached to a stem. It will be noticed that there is a small hole in the centre of two discs, while in a third it is placed at the side (fig. 1, nos. 14, 17, and 16).

Pins furnished with a stout loop of circular section, which as a rule does not slip through the head, are common. Their ornamentation is usually confined to cross-hatchings on the stem-heads, which are also sometimes encircled by lines. The stem of the pin is often flattened near the point like a bodkin. Some are coated with white metal. Exceptional specimens have a small loop attached to the centre of the ring, and it is to be noted that two pins definitely known to have been found in graves in Ireland belong to this type: one was discovered in the Norse cemetery at Island Bridge, co. Dublin;[4] the other with Norse remains near Larne, co. Antrim.[5] A similar pin was found in the

[1] Smith, *op. cit.*, p. 235.   [2] Smith, *Proc. Soc. Ant.*, xx, p. 47.
[3] Armstrong and Lawlor, *Proc. Roy. Irish Academy*, xxxiv, sec. C, p. 98.
[4] Coffey and Armstrong, *ibid.*, xxviii, sec. C, p. 121.
[5] Huband Smith, *ibid.*, ii, pp. 40, 41; see also Crofton Croker, *British Archaeological Association Journal*, ii, pp. 328-33.

Broch of Okstrow, Birsay, Orkney, with other objects, including a penannular brooch of early type.[1]

A ring-pin found in Clontarf, Dublin, has its stalk inlaid with silver and niello. It was 'pronounced by an expert to be a very interesting example of Danish or Scandinavian work of the early part of the ninth century, showing first influences of Irish art, or Hiberno-Danish'.[2] The finding of the pin on the site of the battle of Clontarf would suggest that the pin was of Scandinavian origin, in which there seems no inherent improbability; the oblong head and flattened ring of the Clontarf pin are reminiscent of the stirrup type. Possibly the pin (fig. 2, no. 4) may represent a form heralding the numerous pins with polygonal heads and bevelled sides, for in this example the head is square, ornamented on one side with interlaced, and on the other with linear, patterns. If the sides were bevelled and the square frame of the ornament placed with one corner pointing to the centre of the stem, we should have an example of the diamond centred type.

An exceptional type of pin (fig. 2, no. 5), formerly in the Petrie collection, with a thin ring which slips through the head, may be noticed. The club-shaped pin-head is diagonally shaded. Mr. Smith[3] has shown that this form of pin is common in brooches that can be dated about 800. We may therefore take the same date for the Petrie pin.

Among ring-headed pins an eccentric specimen found in Dunshaughlin crannog is fitted with three rings passed through separate holes in the head: it has been figured by both Wilde[4] and Wood-Martin.[5]

Pins with crutch-shaped heads are usually furnished with a swivel ring: rarely are they unringed. Their heads are often ornamented with settings, probably for the insertion of small beads of amber. The head is stirrup-shaped, and, as is shown on plate XIII, fig. 1, a progressive tendency can be observed for the ring to grow larger until it finally assumes a horseshoe, or even circular, shape.

Two pins in which the crutch-head is rounded in section may be mentioned: they are ornamented both on the small closely-fitting swivel-ring and the stem, one being inlaid with silver (fig. 2, no. 7). In neither case has the locality where they were found been recorded.

A small series of penannular, ring-headed pins (fig. 3, nos. 1–5) show, in what are presumably earlier examples, the ends recurved into a pointed form resembling a bird's beak. Mr. Smith has sent me a photograph of a pin of this

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[1] *Catalogue of the National Museum of Scotland*, 1892, p. 235.

[2] *Journ. Roy. Soc. Ant. of Ireland*, xxxvi, 87 and 219; also *The Reliquary*, April 1906, pp. 131, 132.

[3] *Op. cit.*, p. 246.   [4] *Op. cit.*, p. 560.

[5] *Op. cit.*, p. 110.

type, found at Athlone and preserved in the British Museum ;[1] in this the like-ness to a bird's head is not marked.   The illustrations of three of these pins show a progressive similarity to a bird's head ; in the silver specimen found at Aran, co. Galway (fig. 3, no. 5), lent to me by Lady Shaw, the head and neck are separately projected from the ring.   This characteristic recurving may have been influenced by the turned back hoop-ends found upon some early specimens of plain penannular brooches like that figured by Coffey[2] as the beginning of
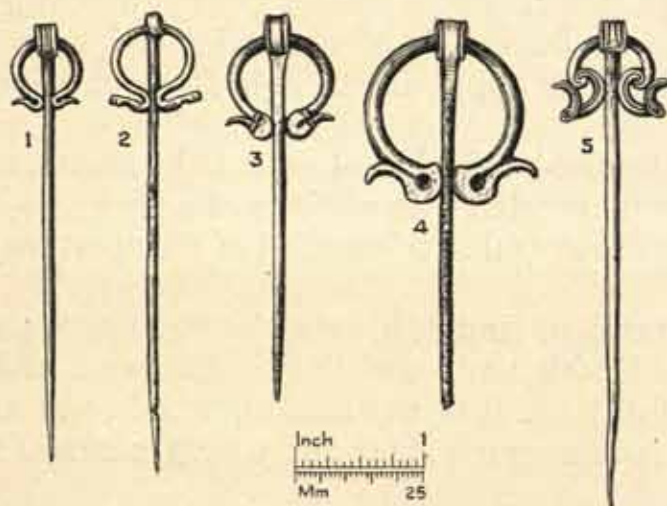
Fig. 3.   Beak-ended ring-pins: 1 and 2, Lagore crannog, co. Meath ; 3, said to have been found with a white-metal finger ring in a sand-bank at Bunbeg, co. Donegal ; 4, Ballyfallon, co. Meath ; 5, Aran, co. Galway.   The first four bronze, the fifth silver.

the penannular series.   Though there is little evidence to go upon, a date for the pins of not later than the sixth century may be suggested.

Two bronze pins of allied form may be noticed : the first is ornamented with human heads.[3]   It is said to have been found in Lough Ravel crannog, Derry-ullagh Bog, Randalstown, co. Antrim.   The second is animal in form, but its gaping jaws meet, they are not recurved.   It was found at Ballynass Bay, co. Donegal.[4]

Varieties of ring-pins to be mentioned include a type in which the ring is furnished with one or more projections, of which the central is in some cases pierced.   In plate XIII, fig. 2, no. 1, the projections number three : when looked at from above they resemble animal-heads, in another example they have become a mere aggregation of knobs, while in other specimens they are reduced to a single projection.   A large silver pin of this type whose locality is unknown

[1] *Archaeological Journal*, ix, p. 200.   [2] *R. I. A. Celtic Christian Guide*, 1910, p. 20.
[3] *Ulster Journal of Archaeology*, iv, p. 269; and Wood-Martin, *Lake Dwellings of Ireland*, 1886, p. 109.
[4] *Ulster Journal of Archaeology*, vi, p. 351.

(pl. XIII, fig. 2, no. 6) has the ring ornamented with a herring-bone pattern, the two animals' heads having their eyes inset with blue glass.   The projection is ornamented with five small settings of amber; both it and the head of the pin-stem are decorated with silver chain work, of a type not unlike that to be seen at the base of the Ardagh chalice.   This feature may assist us in dating the pin to the end of the eighth century, and, as a ring-headed pin with three projections was found with a tortoise brooch in a Viking grave at Oronsay, Caithness,[1] which can be assigned to the first half of the ninth century, we may perhaps take the large pin as the beginning of the series and from it derive the other examples.   In any case, an approximate date for such pins is the early ninth century.

Ringed pins with disc-heads do not seem to be numerous.   Some examples (pl. XIV, fig. 1) are ornamented with settings of amber and enamel.   The rings have disappeared from several specimens; but the aperture for insertion can be seen.

Two pins with pendent ring-heads may be mentioned; one (pl. XIII, fig. 3, no. 1) is ornamented with amber settings, interlaced, and linear ornament. Another (pl. XIII, fig. 3, no. 2) of the same general form has lost its settings. A third exceptional specimen (pl. XIII, fig. 3, no. 3) contains a triangle enclosing an interlaced triquetra.

The head of a unique pin found near Drummiller Rocks, Dromore (fig. 2, no. 8), pierced for the insertion of a ring, is capped by a half-bead of glass with a blue ground, from which rise knobs ornamented with white threads, the base of the head being bordered with diagonal blue bands on a white ground. Highly ornamented glass beads having been found in Ireland[2] in graves of the Viking period, it cannot be argued that the pin found at Drummiller is of early date on account of its peculiar head: the use of glass beads for decorative purposes appears to have survived in Ireland to a late period.

A small copper pin (unpublished) having its head set with a bead of opaque blue glass was found at Inishglora, co. Mayo.   Wilde[3] has figured a bronze pin threaded by a small bead of clear blue glass.

A ring-pin of peculiar form (fig. 2, no. 6) has at the base of the ring a triangular-shaped projection in the form of a bird's head, its beak being pierced with a small hole; the bird's wings are indicated, its back is ornamented with an interlaced triquetra.   Possibly an extension of this type may have evolved into pins like that found at Clonmacnois, figured by Romilly Allen,[4] now in the possession of the Earl of Dunraven (a similar specimen being in the Irish

[1] Curle, *Proc. Soc. Ant. of Scotland*, xlviii, p. 292.
[2] Armstrong, *Man*, 1921, no. 40, p. 71.   [3] *R.I.A. Catalogue, Stone, etc*, p. 163, fig. 121.
[4] *Celtic Art*, p. 221.

National collection), and, eventually, into such forms as that figured by Coffey,[1] said to have been found in co. Kilkenny.

A large number of pins are ornamented with a small disc-shaped head, usually rising to a point, decorated with grooved lines radiating from the centre. An exceptional specimen, in which the grooving has been varied by the addition of a lozenge, is illustrated (fig. 4, no. 7). The stems of some of these pins are ornamented with dots, herring-bone, or linear patterns. To date this common form of pin is difficult; specimens are represented in the principal crannog finds, etc. A pin of this type was found in 1865 lying beneath loose stones close to the entrance of the northern chamber of Cairn T, Loughcrew, co. Meath. It is, however, stated by Conwell[2] that the pin was picked up among loose stones, where it may have accidentally penetrated: it can therefore lay no claim to the antiquity of the tomb.

Pins with animal heads are rare. A few are preserved in the Irish National collection. The heads of some are curved, showing resemblance to the head of a horse, of which the specimen figured by Wilde[3] will serve as an example. In one (fig. 4, no. 3) the head is T-shaped. Another specimen (fig. 4, no. 6) shows what appear to be meant for horses' heads placed in reverse position, one on each side of the pin's head; in others (fig. 4, no. 8) only one head is indicated; in one a dog's head appears (fig. 4, no. 9). A pin with the head bent round in the form of a bird's neck and beak is threaded by a ring (fig. 4, no. 5). But the most remarkable of the animal pins is a specimen (fig. 4, no. 10) in which the upper part of the stalk is tinned, and ornamented with niello. The head is composed of an animal's head with wide-opened jaws, from whose throat protrudes the neck and head of a second animal which bites the first animal's jaw. Examples of animals attacking each other's heads occur in the MSS.;[4] also upon the east face of the High Cross at Killamery, co. Kilkenny.[5]

A pin capped by an animal's head, pierced at the jaws, probably for the insertion of a ring, was found in the Norse Cemetery at Island Bridge, co. Dublin.[6] The finds from these burials are not precisely dated, the interments having probably lasted over a number of years, but the ninth century may be suggested as a general date. Possibly the animal-headed pins may be taken as belonging to the same period.

A number of pins has small circular or oblong heads. Of these the most attractive is a pin (fig. 2, no. 2) formerly in the Petrie collection. On one side of the head is a cruciform pattern; on the other a circular setting now empty.

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[1] *R. I. A. Celtic Christian Guide*, p. 32.   [2] *Tomb of Ollamh Fodhla*, pp. 30, 31.
[3] *Op. cit.*, p. 555.   [4] Sullivan, *Book of Kells (Studio*, 1914), plates iii and xv.
[5] Stokes, *Trans. Roy. Irish Academy*, xxxi, pl. xlvi.
[6] Coffey and Armstrong, *Proc. Roy. Irish Academy*, xxviii, sec. C, p. 121.

A pin of almost identical form (fig. 2, no. 3) has its setting filled by a half-bead of blue glass; it is probable that the pin from the Petrie collection, and other examples in which the settings are missing, were filled in the same manner. The sides of the head of the Petrie pin are ornamented with fret patterns in niello work and the upper portion of the stem with interlaced patterns in the same medium.   This ornamentation resembles in style that on the stem of the pin found at Clontarf (see p. 78).   Probably both pins belong to about the same date, i.e. the ninth century.

Pins with squared heads are not uncommon.   Some are ornamented with vertical lines, making it possible that the maker may have been thinking of a human hand.   The heads of a few pins are spatula shaped; of these one assumes considerable size and length.   A connexion may possibly be traced between such pins as illustrated on fig. 4, no. 11, and those with the stirrup-shaped heads and swivel rings described on p. 78; it will be noticed that in both types the general shape and the ornamentation of small circular holes are similar.

The heads of some pins are formed by dividing the stem at the head and curving the divided ends into a spiral.   On one (fig. 4, no. 2) considerable remains of plating or tinning are to be seen, in another example the ends are curved into a figure 8; other specimens, like that figured by Wilde,[1] have the dividedends curved inwards instead of outwards, while one has two additional spirals attached to the head.

Possibly the well-known pin from Dunshaughlin crannog, with a solid curved head and millefiori settings,[2] may have been derived from the double spiral-headed pins, the settings representing the centre of the spirals.   In one specimen, as mentioned on p. 81, the recurved ends terminate in horses' heads.

It will be noticed that the three spiral-headed pins and a long pin with a grooved head (fig. 4, nos. 1, 2, 3, and 4) have a boss on their stems.   Pins of tinned bronze, or of silver, with stemmed bosses, are characteristic of the Carlovingian period: they can be dated seventh and eighth centuries. A number of such pins are illustrated by Boulanger[3] and may be compared with the Irish specimens.   The two series appear to be related; the suggested date for the Irish pins would be, therefore, the seventh or eighth century.

A type of pin common in Ireland has its stem-head, which is fitted with a swivel ring, ornamented with cross-hatchings, in some cases these being sufficiently raised to form small spikes.   Ornamentation by means of cross-hatching goes back to the pre-Christian La Tène period,[4] the cross-hatched surfaces being decorated with enamel: later, such scored panels became in themselves an

[1] *Op. cit.*, p. 559.   [2] Figured by Coffey, *op. cit.*, p. 33.
[3] *Le mobilier funéraire*, 1902-5, pl. 39.
[4] Smith, *Proc. Soc. Ant.*, xxi, pp. 63-71; also *Archaeologia*, lxv, p. 240.

ornamental motive though they do not appear in either brooches or pins of the earlier periods of Irish Christian art.

The pins with cross-hatched, or brambled, heads share this feature with the so-called thistle brooches worn in Ireland during the early part of the tenth century.   It may be noted that the side of the thistle brooches which came into
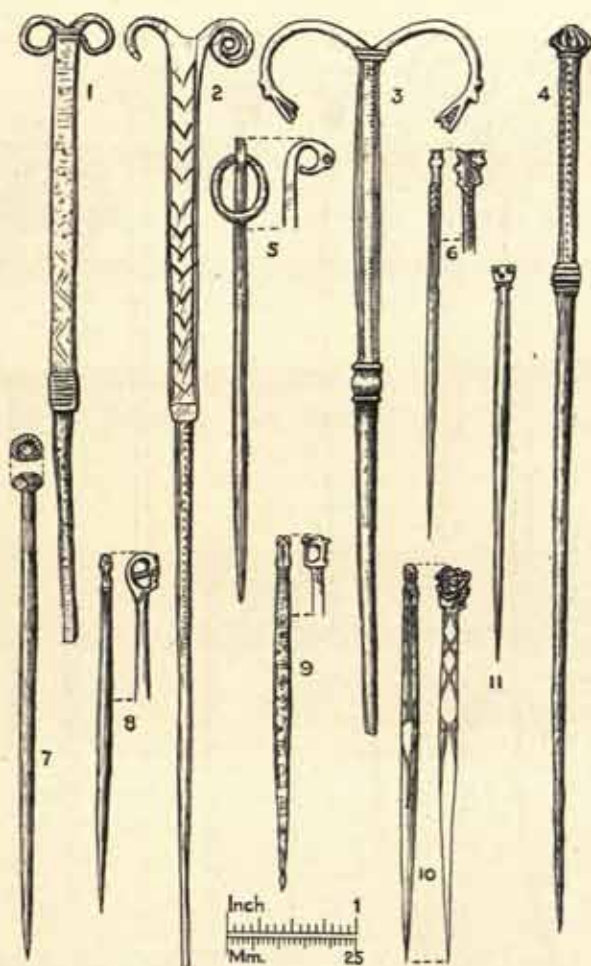

Fig. 4.   Spiral, zoomorphic pins, etc.: nos. 8 and 9 Strokestown crannog, co. Roscommon; no. 11 found in Christ Church Place, Dublin.

contact with the dress was often left unbrambled, the bosses on the head and terminals being decorated with interlaced work or fret patterns.   On some of the bramble-headed pins (fig. 5, nos. 2 and 10) the central lozenge portion of the head is ornamented with interlaced work or linear patterns.   Whether the pins may be considered earlier than the brooches, and the latter derived from them, or the reverse, it is clear that the taste for brambled surfaces affected both types of ornaments; while the style of decoration, other than the brambling, is similar on both pins and brooches.

The finest of these pins in the Irish National Museum is a specimen which

was formerly in the Petrie collection, exact particulars of its history being unknown. In this example (fig. 5, no. 6) the head is ornamented with small spikes, while the ring assumes at each end an animal form. A degeneration of this zoomorphic character can be followed through several specimens until all traces of the animal's head at the end of the ring is lost. There was also
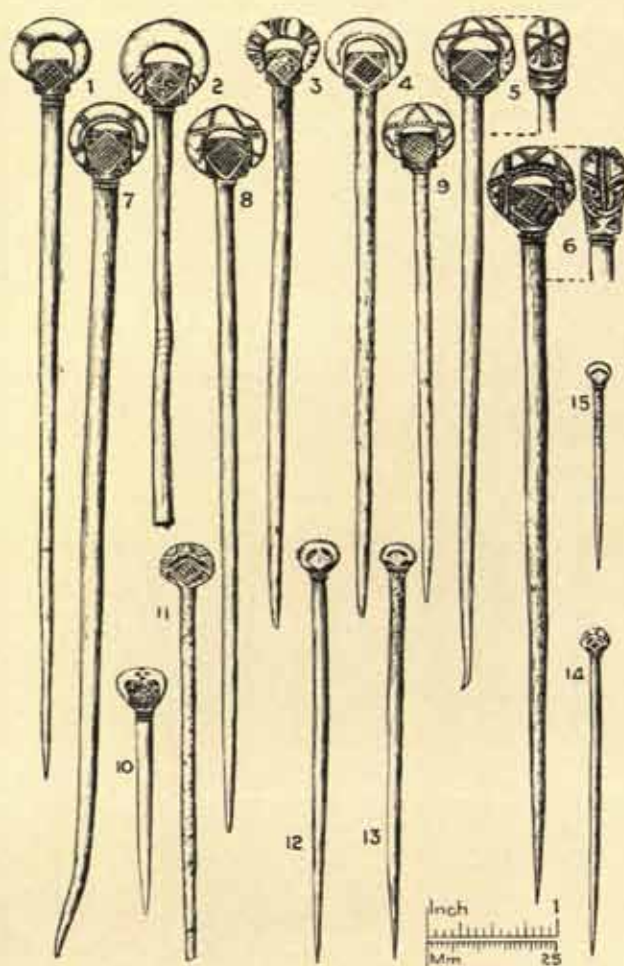
Fig. 5. Brambled ring-pins; no. 5 found in Cloonfinlough crannog, co. Roscommon; no. 8 found in co. Down.

a tendency for the ring of these pins gradually to approach the head more closely until they coalesced (fig. 5, nos. 1–15), a specimen in this later stage of evolution having been found in excavating a crannog near Clones.[1] In final forms the lozenge on the head can still be recognized; the pin has decreased in size, while the merging of the ring into the head has resulted in a simple rounded form.

The age of brambled pins is not clear, for no Irish specimen appears to have been found with objects which would exactly date it; but if, as would

[1] D'Arcy, *Journ. Roy. Soc. Ant. of Ireland*, xxx, p. 217.
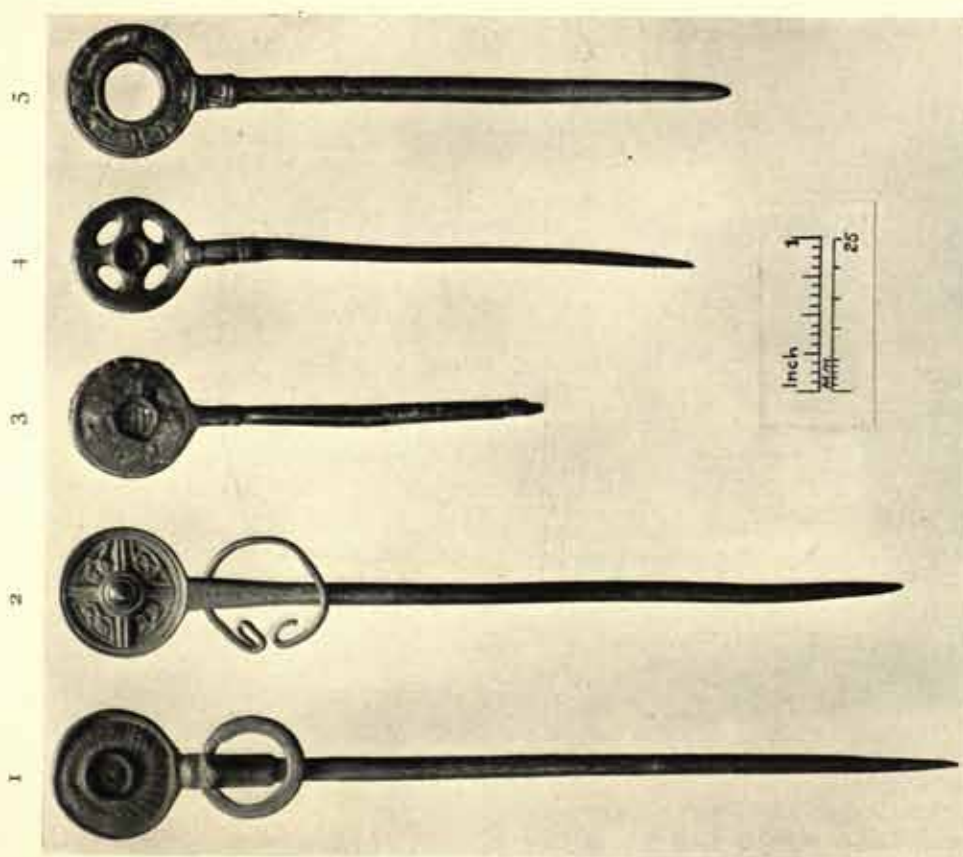
Fig. 2. Ring-pins.

Fig. 1. Disc-headed ringpins: no. 1 found near the ruins of Gallen Priory, Ferbane, King's co.; no. 4 from Ballinderry crannog, co. Westmeath.
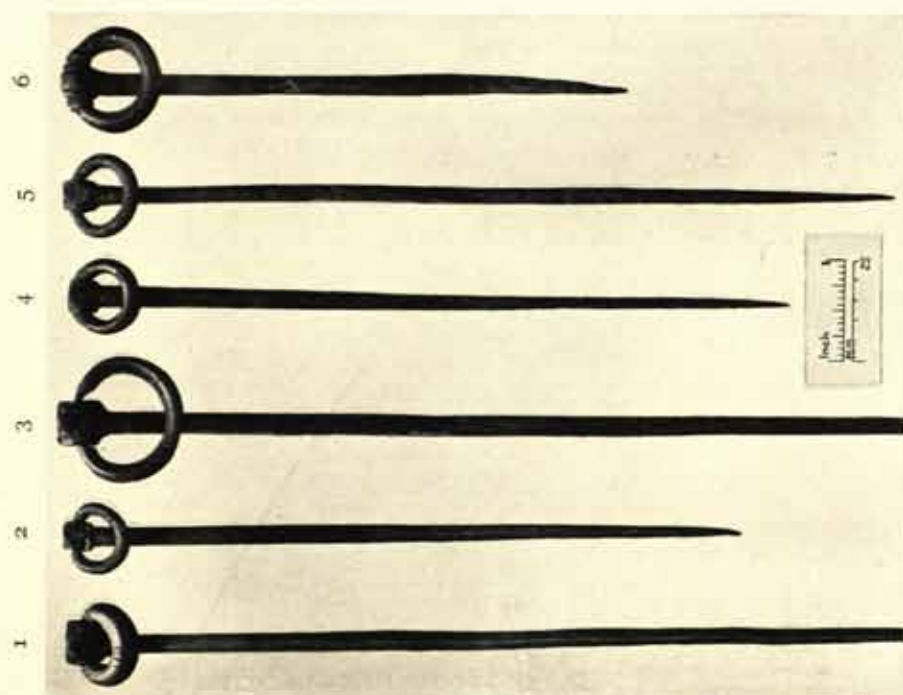
seem probable, these pins and the thistle brooches are connected, then both may be considered to be of the same period, i.e. the tenth century.

How long the evolution from the ordinary brambled pins with swivel-rings (fig. 5, no. 1) to such types as fig. 5, no. 15, may have taken is difficult to say. But if the intermediate forms were removed there would be little obvious con-nexion between the two.

The cross-hatched ring-pins lead us on to ringless pins, distinguished by having their heads brambled. In some cases they are ornamented with small projections at the top and sides (pl. XIII, fig. 4, nos. 6, 7, and 8). A pin of this type was found with some other small antiquities in one of the passages at Dowth in 1885,[1] unfortunately not in circumstances that assist in dating it.

Perhaps it is permissible to trace an evolution from these examples to forms such as those shown on plate XIII, fig. 4, nos. 9, 10, and 11, which, for want of a better term, may be called diamond-headed. It will be noticed that the heads of some of the diamond-headed pins are cross-hatched, recalling the brambling of the types from which it is suggested they are derived. A diamond-headed pin, resembling the Irish specimen (pl. XIII, fig. 4, no. 11), which belonged to Archbishop Wulfstan of York, and can be dated to the early part of the eleventh century, is in the collection of the Society of Antiquaries.

A type apparently related to the bramble-headed ring-pins has the bram-bling replaced by interlaced ornament either on both sides of the head, or on one ; the other being ornamented with linear designs. Not only is the shape of the head of the brambled and of this type similar, but in some, such as the silver pin (pl. XIV, fig. 2, no. 1), the ring, incised with lines arranged in groups attached to the head, is of the same half-circular form. The free use of silver for making both brooches and pins is a feature of the Viking period, silver being then traded in large quantities to the north and west from the east of Europe. Large silver pins may therefore be placed late in the series, probably not before the late ninth or early tenth century. A further indication that this is their probable date is their likeness to the pins of brooches. In the best periods, the eighth and early ninth century, their decoration is interlaced ; but on the thistle brooches this is replaced by simple step- and linear patterns, and it is precisely this form of ornament that we find upon the stems of the ring-pins illustrated (pl. XIV, fig. 2, nos. 2, 3, 4, 5).

By way of retrospect the following dates for pins may be suggested. Those decorated with triskele and spiral ornament derived from the pre-Christian period may be assigned to the fifth and sixth centuries.

The polygonal-headed pins with rings of wire seem to be related to the early penannular brooches, and probably belong to the sixth century.

[1] Coffey, *New Grange*, 1912, p. 48.

Long pins with bosses on their stems are probably of seventh- or eighth-century date. The age of highly ornamented pins with decoration similar to that of penannular brooches may be arrived at by their resemblance to dated examples of the latter. Many appear to belong to the end of the eighth or beginning of the ninth century, to which time may also be assigned the ring-pins with projections from the ring.

For several other varieties of pins, crutch-headed, zoomorphic, etc., it is difficult to suggest a date other than the ninth century.

Finally, the brambled pins, and the large pins of similar form, but in which the brambling has been replaced by interlaced and linear patterns, may be placed in the tenth century.

DISCUSSION.

Mr. REGINALD SMITH regarded the proposed classification of Irish pins as a great advance : it introduced order among a mass of material extending over many centuries, and even if a logical arrangement was not necessarily chronological, the attempt was a challenge to archaeologists both at home and abroad to produce something more in accordance with the few ascertained facts. Once a few landmarks were fixed, minor adjustments could be made as occasion offered, but a working theory was indispensable, and had been based by Mr. Armstrong on the extensive material in Dublin. Limiting dates were always useful, and it might be found possible to utilize the raids of the Scots in that connexion, though the sea-rovers from north-eastern Ireland probably took more from England than they left behind. Certain Irish types on the English coast referable to those raids might show what stage of development was reached in the period A. D. 300–500.

The PRESIDENT said that a scheme for classifying the Irish pins, even if subject to revision, would be welcome to all who had to deal with antiquities of that sort. It was not only a lesson in development of types, but a substantial aid to chronology, and covered a period in Ireland when archaeology was denied the benefit of trustworthy historical evidence.

VI.—*Notes on a Vellum Album containing some original sketches of public buildings and monuments, drawn by a German artist who visited Constantinople in 1574.* By E. H. FRESHFIELD, *Esq., M.A., F.S.A.*

Read 15th June 1922.

THE interest in the unpublished document now submitted to the Society lies, mainly, in three large sepia drawings of a triumphal column, erected by the Emperor Arcadius in honour of his father the Emperor Theodosius the Great. My purpose is to draw attention to the historical importance attaching to these drawings, for, excepting some fragmentary sketches to be referred to presently, they are the only evidence we now possess to corroborate the narratives of contemporary historians who describe an important episode in later Roman history, when Theodosius the Great was engaged in a war on the Danube with a 'new Scythian people who had not been seen before by any one'. We shall have no difficulty in identifying these new-comers, thus described by Zosimus, with the Tartar Huns, the forerunners of Attila and his host, who now, and for the first time, faced the Roman army in battle and were utterly defeated. The victory thus won for Theodosius and his imperial colleague, the second Valentinian, was considered, and not without reason, to be important enough to merit record in this triumphal column, for the westward invasion of the Huns, though not stopped, received a check from which it did not recover for another half-century.

A simple plan seems to be to begin with an account of the album and the sketches, then to continue with a short reference to the history of the events which led up to the war and the victory of Theodosius recorded in the bas-reliefs, and to conclude with a review of the scenes represented.

I do not know where or how my father acquired this album. I knew of its existence in his library, which has now come to me. It must have been in his possession in 1900, for, on the 1st September in that year, and on the occasion of his election to Nobody's Friends Club, he wrote, and afterwards printed for private circulation, a letter to his friend the first Lord Aldenham, and in it he refers to this album. This letter was afterwards reviewed in the *Athenaeum* newspaper on 9th March 1901, and it appears from the context that the point of interest for the two friends was a liturgical one. It was customary for the emperor and the patriarch to attend an official service on the 1st September, the beginning of the official year, called the 'Indiction'. In four Greek MSS., gospel lectionaries of the eleventh and twelfth centuries, which my father had

then recently acquired at Salonica and which are still in my library, the rubrics directed that the service should begin in St. Sofia, and a procession was then formed by the Hippodrome to the Church of the Chalcoprateia near by. My father then proceeds to refer to one of the sketches in this album where the ruins of this church appear to be figured. And that is the only reference I can find in my father's papers to this album.

The album is bound in a large sheet of vellum neatly folded at the edges, and contains thirty-six pages of paper, folio size, with a water-mark, a sun in a circle with a cross above and the letters A. M. T. below in 'Jacobean' capital characters. A loose sheet of inferior paper contains what was obviously a draft index to the contents. This index, like the explanatory legends on the sketches, is in Latin, and I think the script is German. The date is fixed by a legend on the first sketch, 'hoc anno 1574', and that date also appears in other places. Besides the bound sketches, there are also two loose ones, a view of St. Sofia and the Hippodrome, to which my father refers in his letter to Lord Aldenham, and a picture of the tombs of Sultan Selim and five of his six sons. The last has an important endorsement, which will be referred to presently.

The subjects illustrated are:

The column of Constantine.
The obelisk of Thothmes in the Hippodrome, four views.
The bronze serpent column, also in the Hippodrome.
The obelisk of stones, also in the Hippodrome.
Three views of the interior of St. Sofia.
Three views of the column of Arcadius.
Mosque of Sultan Suleiman.
Tomb of Sultan Suleiman.
Leander's Tower.
Column of Claudius Gothicus at Seraglio Point.
Two pictures of an Abyssinian rhinoceros.

The loose pictures are:

General view of St. Sofia, adjacent buildings, and the three monuments in the Hippodrome.

Tomb of Sultan Selim and five of his sons who were put to death by their brother, Sultan Murad, at his accession.

Each illustration deserves more than a passing notice; but as my chief purpose is to draw attention to the column of Arcadius, I will do no more here than make a few general observations about them.

Beside the short explanatory legend in Latin on each picture, there is also a reference to the book of Peter Gyllius, the traveller, who visited Constantinople in the beginning of the sixteenth century.

Excepting the column of Arcadius, the serpents' heads on the bronze column, and some of the buildings between St. Sofia and the Hippodrome, all the buildings and monuments illustrated in this album still exist substantially as our artist saw them.   We can, I think, gauge the accuracy of his drawing of the bas-reliefs on the column of Arcadius by comparing his sketches of the bas-reliefs on the base of the obelisk of Thothmes with the originals.   The number of figures, their attitudes, their relations to one another, and the incidental details, are all faithfully reproduced; and I infer that the drawings of the reliefs on the column of Arcadius are not less accurate.

The drawings of the interior of St. Sofia were obviously made from memory.   It was a difficult matter to visit the interior, and impossible to make a drawing of it.   The same remark also applies to the column of Claudius Gothicus.   It stood in the middle of the Seraglio gardens and was therefore inaccessible; the sketch has certainly been made from a distance.

From a note endorsed on the back of the last of these sketches, and from the explanatory legend, I can establish the nationality and, I think, the identity of the artist.   There is no doubt that he was a German.   The legend describing the tomb of Sultan Selim and his five sons, and the reference to the celebrated general Mustafa Pasha, are written in German and in excellent Gothic script. The memorandum endorsed on the back of the sketch is as follows: 'Missa mihi Constantinopoli Viennam Januarii 1575 a Dño Davido Ungnad von Zonneck successor legatione cum jam inde essem reversus.'   The sketch was folded and sealed with a wafer.

Neither David Ungnad nor the 'ego' sign their names.   We know, however, from other sources [1] that Ungnad had two terms as imperial envoy of the Emperor Maximilian II [2] to Constantinople, first from 16th April to 23rd September 1572, and then from 1574 to 1578.   We know also that he had a chaplain named Stefan Gerlach, who interested himself in the antiquities of Constantinople in general and the Eastern Church in particular, and I suspect that these sketches were either made by or for him.   I conjecture that they were intended for reproduction in copper-plate to illustrate a book.   I have failed, however, to find any book in which they were used in that way.

The column drawn by our artist was known to medieval travellers as 'coch-lidis' (from the spiral staircase within), and 'historiata' or 'historialis' from the bas-reliefs on the base and the shaft.   The reliefs on the shaft were arranged in a more or less continuous series and spiralwise from the bottom of the shaft to

[1] Zedler's *Universal-Lexicon*, xlix, 1554.
[2] Maximilian, the nephew and son-in-law of Charles V, was emperor from 1564 to 1576.   He had concluded a treaty with Sultan Suleiman in 1567, and did not therefore join Don John of Austria and the Venetians at the Battle of Lepanto (1571).

the top. This type of monumental column is, of course, familiar to us from Trajan's pillar at Rome, erected to commemorate his two campaigns and ulti- mate victory over Decebalus and the Dacians, and the similar column, erected by Marcus Aurelius, to commemorate his victory over the so-called Marco- manni. Inasmuch as it was the purpose of Constantine to make his new city a twin capital, and that the official title was New Rome, it was perhaps not accidental that Constantinople came to possess two pillars. We learn from the early authors and from the medieval traveller Gyllius, that there were two, both identified with the Emperor Theodosius; moreover, in form of con- struction they were alike. This, then, may be a convenient place to record the position these pillars occupied in the city, premising that all trace of the older pillar has disappeared and, so far as I know, no drawings of it have come down to us.

This older pillar was, it is said, built by Theodosius the Great in 386. Gyllius, who visited Constantinople in 1544, tells us that it was destroyed in 1517. It is mentioned by several travellers to the Levant before his time. Their names and references are conveniently recorded for us in M. J. Ebersolt's new book.[1] This pillar stood in the valley of the Lycus at a place known to the Turks as Et Meidan, or meat market, the successor, no doubt, of the Byzantine forum 'Bous'. Recent fires have cleared all this quarter of Constantinople of buildings, and I had hoped to be able to find (1921) some trace at least of the base of it. But I was not successful, and I conclude that the materials were all taken away and that it was utterly destroyed.

The newer pillar, the subject of this paper, was, it is said by Socrates, built by the Emperor Arcadius in honour of his father. Arcadius began it and his son Theodosius II finished it. The date of foundation would therefore be between the accession of Arcadius in 395 and his death in 408. It was pulled down in 1729 in consequence of damage by earthquake. There is no doubt about the site, for the base still stands in the square or forum known to the Turks as Awret Bazaar, the slave-girl market. This forum, like the Et Meidan, is situated in one of the main streets of Constantinople leading from the Royal Palace and the Hippodrome to the predecessor of the 'golden gate' or triumphal gate of the city. I say predecessor because the triumphal gate was not built till some time after the death of Arcadius and during the reign of his son Theodosius the younger. It formed, in fact, part of the famous walls built by the young emperor to protect the city from the Huns. Unless I am mistaken, this street was, at least as long as old Rome remained the twin capital, the High Street *par excel- lence* of Constantinople, for it was the beginning of the high road, by

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[1] *Constantinople Byzantine et les Voyageurs du Levant*, Paris, Leroux, 1919. A summary of the then known drawings of the Column of Arcadius is given on p. 68, with a short bibliography.

Selymbria and Salonica, to Durazzo on the Adriatic, where ship was taken for Brindisi. Thence the Appian Way led to Rome.

The events in Roman history which led up to the campaign and victory recorded on this pillar may be briefly summarized as follows.

Since the foundation of the Empire, in the days of Caesar Augustus, the Romans were engaged in almost incessant war with their neighbours, the Teutons beyond the Rhine, the Slavs beyond the Danube, and first the Parthians and then the Persians in Armenia and the valleys of the Euphrates and the Tigris. By the conquests of Trajan the Romans became masters of all the European countries west and south of the Rhine and the Danube; and in Asia of Asia Minor, Armenia, Syria, and Mesopotamia. Some of his successors, like Marcus Aurelius, Valerian, and Gallienus, were hard put to it to retain what had been gained. The brilliant victories won by Aurelian in his short reign of five years gave to the Empire a new lease of life which lasted through the eras of Diocletian and of Constantine and the princes of his family.

It is, of course, a matter of well-known history that when Constantine's family came to an end by the death of the ill-fated Emperor Julian the Apostate, and after Jovian's brief reign of twelve months, the staff of the Roman armies selected as imperator one of their generals named Valentinian. The new prince of the Roman people was chosen by the army and elected by the Senate in A. D. 364. Following the policy laid down by Diocletian, and continued by Constantine, of dividing the Empire into two distinct administrative dominions, he determined to share the honours and responsibilities of his office with his brother Valens. Valentinian administered the western dominions from Trèves or Milan, and Valens the eastern dominions from Constantinople. During their joint principate the two brothers were engaged in almost incessant wars with their neighbours. It was during his campaigns against the Alemanni, the Sarmatians, and the Quadi, that Valentinian chose, as dux or commander of Moesia, the young general who afterwards became his son-in-law,[1] and is known to us as Theodosius the Great. Valens was chiefly occupied in wars in Asia Minor and Syria.

The history of the campaign recorded on this pillar may be said to begin with the defeat and death of Valens at the battle of Adrianople (377–8).

Representing that they were being hard pressed by barbarous tribes on the north of the Danube, the Goths obtained Valens's permission to settle in Bul-

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[1] The families of Valentinian and Theodosius thus united by the marriage of Galla and Theodosius furnished the Romans with princes for ninety-one years, representing four generations. The table below (see next page) gives the dates of the accessions of these princes, and may help us to identify the chief personages represented on this pillar.

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garia and Thrace, and they were allowed to bring their arms with them. The injudicious treatment of the new settlers by the Roman officials caused a revolt, and in the war that ensued the Roman army was completely defeated in a pitched battle fought near Adrianople. Valens disappeared and his body—probably burnt accidentally—was not found.

We may suppose that the Emperor Gratian, who arrived upon the scene of action too late to help his uncle and colleague Valens, felt unable to rule the Empire with no more assistance than his brother Valentinian II could afford, for Valentinian was then about seven years old. He determined to confer the principate of the eastern dominions upon Theodosius. The election of Theodosius was approved by the army and confirmed by the Senate, and the new prince immediately set to work to subdue the Goths and restore order in Thrace. Within four years of his election—that is, by A. D. 382—Theodosius succeeded in pacifying the Balkan peninsula, partly by diplomacy, but mainly by force of arms and good generalship.

Some three years later, that is in 385, the Goths beyond the Danube returned to the charge, under the leadership of Odothoeus, and brought with them, as allies against the Romans, a new Scythian people whom, as Zosimus tells us, no one had ever seen before.[1] The incidents in this new campaign and the victory

Dates of Accessions.	Western Dominions.	Eastern Dominions.
364	Valentinian I	Valens (killed at the battle of Adrianople, 378).
	Succeeded by his sons	
375	{Gratian (b. 359) {Valentinian II (b. 371)	
378	. . . .	Theodosius I (married Galla, daughter of Valentinian I), d. 395.
383	Valentinian II	
392	(Valentinian II, murdered by Arbogast)	
	Sons of Theodosius.	
395	Honorius (b. 384)	Arcadius (b. 377)
408	. . . .	Theodosius II
425	Valentinian III (married the daughter of Theodosius II)	
450	. . . .	{Pulcheria and {Marcian (married the Princess Pulcheria, the daughter of Arcadius) died s. p.
455	Death of Valentinian III	

End of the dynasty of Valentinian I and Theodosius I.

[1] Ἔθνος τι Σκυθικὸν πᾶσιν ἄγνωστον, Zosimus, l, iv, p. 252 [38]. The whole story of this war as

gained are recorded on this pillar. Before relating them, there is, however, one other important incident in the Roman history of this period that may be mentioned conveniently here, since it identifies this pillar with Theodosius, and his victory was in no small measure due to it. I am referring to the treaty of peace concluded with the Persians.

The Roman government received timely warning of the projected invasion of Odothoeus, and it was fortunate that this treaty of peace had been concluded between the Romans and the Persians. It seems probable that the Persians, like the Romans, had also been threatened with a Scythian invasion. I think we shall have no difficulty in identifying the allies of Odothoeus, the new people whom no one had ever seen before, with the invaders of Persia, and in them the forerunners of the Tartars, who were to figure in the Roman history of sixty years later as the Huns of Attila. However that may be, the Persian and the Roman sovereigns exchanged gifts on the ratification of the treaty, and among them an elephant was sent to Theodosius. A scene in the bas-reliefs on this pillar represents the conclusion of the treaty and presentation of this elephant to Theodosius by the Persian envoy; and another scene represents the arrival of the animal in the Hippodrome, where it appeared again in the circumstances to be narrated presently.

Students of this period of Roman history are aware of the difficulties in fixing the precise date of any particular event, and I am not going to attempt to do so except in such a general way as may be sufficient for the present purpose.

The preparations for repelling the new invasion, which took place in A.D. 386, were entrusted by Theodosius and Valentinian II, in so far as the latter may be assumed to have had any voice in the matter, to a general named Promotus. It was expected that the attack would be made in the lower reaches of the Danube, and was, I think, actually made near the territory now known as the Dobrucha, a small triangular piece of land bounded by the Black Sea, the Danube, and, roughly speaking, Trajan's wall and the modern railway between Kustendji and Tchernavoda. Promotus accordingly determined to make use of the Roman fleet as well as the army, and, while the latter was crossing Thrace to the scene of action, large ships were sent round by the Black Sea and up the Danube above the spot where it was expected that Odothoeus would try to cross the river. We must suppose that the new plan of using the fleet as well as the army was kept a profound secret, for, as will presently appear, Odothoeus was taken by surprise and caught in a trap.

When Promotus arrived on the Danube, Odothoeus and his army were either permitted or encouraged to make extensive preparations for crossing

deduced from Zosimus and Claudian is told in Gibbon's *Decline and Fall of the Roman Empire* (ed. Professor J. B. Bury, vol. iii, p. 134).

the Danube; they made rafts and boats, and a scene on the pillar represents the boatbuilders engaged in these works. The 'general idea' of Promotus' plan of campaign was to entice Odothoeus with his boats and rafts to the south side, to await his arrival there with rows of galleys moored alongshore and supported by the army on the river banks, and then, when Odothoeus was well across, the big ships, moored upstream and waiting the opportune moment, were to drop down behind the enemy and cut off his retreat to the north shore. It was thus designed to be a naval, rather than a military combat, and it was intended and expected that the decisive engagement would be determined by the fleet.

All happened as Promotus intended. From the contemporary historians Zosimus and Claudian we know that the victory was complete, and that on his return to Constantinople Theodosius was awarded a 'triumph' and his triumphal chariot was harnessed to the elephant which had been presented by the King of Persia. It remains to be seen how far the reliefs on this pillar can supplement the meagre details to be gleaned from the short notices of the historians.

The series of reliefs on the shaft begins with scenes in the Hippodrome. These appear to be connected with the reception of the elephant, presented by the King of Persia, in the presence of Theodosius and the Empress Galla, and the young prince Arcadius, then eight years old. We are then shown the emperor, his staff, and troops passing through the streets of the city. I only venture to recognize one building, the aqueduct of Valens, then recently erected, which is represented in close proximity to the main gate of the city wall. I am referring, of course, to the pre-Theodosian wall, and I may as well say at once that I have no intention of being drawn into a discussion on the vexed question of Byzantine topography.

In the next scene we see the emperor issuing from the main gate. The gate has a single arch and is flanked by two pillars. Under the crown of the arch an angel of victory, with extended hand holding a wreath, hovers over the emperor. The emperor looks up to it; immediately in front of him is a small figure, which I take to be the young Arcadius, and on his right hand a female figure, probably an allegorical representation of Rome personified. I do not think it can be the empress.

The troops, who line the streets as the imperial cavalcade passes, fall in behind it and march through the suburbs, where they are joined by transport wagons, drawn by oxen, pack mules, and dromedaries. We see them sometimes in single and sometimes in double file, passing through a wooded and then a mountainous country, meeting peasantry with their flocks and oxen. Some triangular panels, with figures in them, probably represent a village.

Something like a march past or a review took place when the army reached the Danube. The emperor or Promotus stands in front of a tent and harangues the soldiers. This tent stood near the shore, and we are shown the transports on the river close by and the troops marching along the bank.

Two distinct engagements are represented, one on the river and the other on land. A council of war, a march past, or a review apparently took place after the first and before the second. This arrangement of the scenes suggests that after their victory on the river the Romans crossed over to the north shore and defeated the rest of the barbarians in a pitched battle. The final scene at the top of the shaft represents the crowning of the victorious emperor, by one of the staff. The soldiers and senators are drawn up on either side to witness the ceremony.

The river scenes, so far as they go, entirely confirm the account of the historian Zosimus. The emperor was certainly present when the expeditionary force left Constantinople, and accompanied it as far as the Danube. Moreover, if we can, as I think we may, treat these scenes in chronological sequence, it would seem that the elephant was presented to Theodosius when he was on his way to the Danube. The elephant therefore figures twice in the bas-reliefs. On the occasion of the council of war, march past, review, or whatever the ceremony was, the two chief personages present are represented sitting side by side on a canopied throne. We might perhaps infer from this that Valentinian II, then fifteen years old, came to join his colleague and brother-in-law. It will be noticed, when we come to consider the bas-reliefs in detail, that the place of honour on each of the three sides of the base is occupied by two chief personages dressed in the conventional uniform of a Roman general. It must be remembered, however, that the two sovereigns were brothers-in-law, that Theodosius owed his position to Valentinian's father and brother Gratian, and his presence on these bas-reliefs may be purely conventional and complimentary.

I have now identified this pillar with Theodosius and the campaign on the Danube conducted by Promotus for the Romans against Odothoeus and his mixed host of Ostrogoths and Tartars. Before reviewing the reliefs in detail we may conveniently consider here some other sketches of this pillar which have been already published.[1]

The first, and the more important of these for my present purpose, is a general view of this pillar reproduced in Sandys's *Travels*, 7th edition, published in 1673, at p. 28. This same drawing, much reduced, is figured as a frontispiece to the edition of *Gyllius* published at Leiden in 1632.

The second is an original drawing of only one side (*côté tramontane*) of this

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[1] Ebersolt, *Constantinople et les Voyageurs du Levant*, p. 68, enumerates them.

pillar. The original, ascribed to the last third of the seventeenth century, is preserved in the collection Roger de Gaignières, in the Département des Estampes, Bibliothèque Nationale, Paris, no. 6514. It is reproduced in the appendix of vol. ii, for 1895, of *Monuments et Mémoires de l'Académie des Inscriptions.* It is there described by M. Geffroy. If correctly dated, this sketch would thus be about a century later than mine and explain a discrepancy in the arrangement of the figures on the base as given in my sketch and in Sandys's on the one hand and Gaignière's on the other.

The third sketch is reproduced by Geffroy in the above-named publication. It is only a fragment and the original is apparently in a German library.

The fourth is an ambitious production ascribed to Gentile Bellini. The originals are preserved in the Bibliothèque des Beaux-Arts in Paris and in the Louvre. Geffroy refers to them. These so-called sketches in my opinion are elaborate drawings made at leisure and skilfully embellished by an accomplished draughtsman in the late seventeenth century. He probably had some original sketches before him. These Bellini sketches are reproduced in Menestrier's *Columna Theodosiana*, published in Paris in 1702. Portions are reproduced in Banduri's *Imperium Orientale*, vol. ii, Paris edition, published in 1711, and in Agincourt, *L'Art par les Monuments*, vol. i, pl. xliii.

In these drawings, as in mine, the dromedaries and the elephant are represented. The legends describe as allegorical subjects the figures that I identify as Thracian peasant folk in their triangular huts. Some of the pack animals are represented as carrying, not baggage, but wooden effigies of the barbarian gods. That at least is how they are defined in the legends and represented in the drawings. The artist does not explain how it comes about that these objects are being carried in the expeditionary force as it is leaving the suburbs of the city. It has been suggested to me that perhaps these drawings are reproductions of sketches of the older of the two pillars erected in honour of Theodosius, and that is quite possible.

Lastly, there is a figure of a column which is reproduced in Ducange's *Constantinopolis Christiana*, Paris edition, 1680, pp. 78–9. This is certainly not a drawing of the pillar sketched by my artist or of the drawings reproduced by Sandys and Geffroy. If not purely fanciful, it may be a representation of the older pillar, but Ducange does not give the provenance of his illustration.

The pillar of Arcadius was made of white marble, as appears by the base, or rather what is left of it. The outer casing, upon which the bas-reliefs were carved, has been stripped off; probably it was destroyed by fire, and only the rough blocks which formed the base remain. A square-headed doorway leads to a small vestibule and about a dozen steps of the circular staircase which led

to the top of the pillar. On the ceiling of the vestibule there is a large carving in relief of the Constantinian monogram, XP.

The illustrations will sufficiently explain the general appearance of the pillar. The best plan seems to start with the reliefs on the shaft, premising that the series begins at the bottom of the shaft on the west side and proceeds by the south side to the east. We begin then in the lowest spiral on the west side with scenes in the Hippodrome. In the upper tier of this panel are statues on pedestals, shrines, or temples, and a three-arched erection which may be the imperial tribune. Neither the obelisks nor the bronze column are represented. In the lower tier a crowd, including soldiers, awaits the arrival of an elephant to which some spectators are pointing. The animal is ridden by a mahout and is no doubt the gift of the King of Persia, Sapor II, to Theodosius. Immediately beyond this scene are figures of Hercules, Cerberus, and the Hydra. Below, some figures appear to be engaged in drawing water.

It will be noticed that near this point the arches, supporting the rows of seats in the Hippodrome, come to an end in an oval panel. This, I think, is intended to be a bird's-eye view of the Hippodrome.[1] To the right of it two larger figures and one small one stand in a row. These I take to be Theodosius, Galla, and Arcadius.

The second row of spirals beginning on the west side presents the city walls with battlements. Behind it, and in front of a group of buildings decorated with towers and façades, a procession of soldiers and cavalry marches towards a single-arch gateway. The last building in the background has arches in tiers extending for some little distance. Were this a representation of Rome we might, in this combination, recognize the Flavian amphitheatre and the arch of Titus. But I think the arched building here represents the aqueduct of Valens, then recently constructed. It was conspicuous and must at that time have been considered to be one of the more important buildings in the city.

I have already referred to the next scene, where the emperor, accompanied by Arcadius, and sped on his way by an angel of victory, is walking out of the city. The ensuing scenes, where the army marches through the country, attended by transport wagons and pack animals, sufficiently explain themselves.

It will be noticed that at intervals in this procession three principal personages are represented. Among the figures on horseback there is one (on the east side, second spiral) sitting side-saddle. I take this to be the empress. In the so-called Bellini drawings three figures are represented in this attitude, and the editor of the drawings, whoever he was, explains that these are the wooden gods or idols of the heathen enemies. My artist only shows one figure.

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[1] The figures do not help this identification. Perhaps the scene is allegorical.

The artist has unfortunately folded his drawing across the fourth spiral on the west side and almost destroyed the representations of the dromedaries which took part in the transport service. Their heads and feet can, however, be easily identified with a magnifying glass. In the last relief of this fourth spiral (east side) we are shown some shepherds and their flocks.

In the fifth spiral (west side) we come to a series of triangular objects with figures in them, and one or two separate figures with domestic animals. I take this to represent a native village and its wild inhabitants. The unknown editor of the Bellini sketches sees in these triangles allegorical subjects. Whatever these are, they seem to finish a scene, and in the next we are shown the presentation of an elephant to a figure on horseback. I have no doubt this is Theodosius receiving the elephant already referred to from the Persian ambassador, who is represented doing obeisance. A group of figures immediately below this scene explains itself. A meeting has apparently taken place and two figures are greeting one another, representing, no doubt, the conclusion of the Persian treaty. In the continuation of the spiral on the east side we see the army on the march again, with transport animals in the rear.

We now come to the sixth spiral on the west side, and here the procession advances in double column. In the lower row two men on horseback are preceded by a group carrying packs, and a mule, carrying a quiver of arrows and a bow, led by a man leaning on a shaft. Above, a group of soldiers come from a building with one arch, and a figure on horseback rides between two companies of soldiers.

In the corresponding spiral on the south side we come to an important scene. The leading soldiers of the companies we have seen in the corresponding panel on the west side approach a building with an arched façade. The first soldier passes by a figure standing in the façade and holding a sceptre. Immediately beyond we come to a group of six persons in front of the façade. The first is seated, and I take it to be the allegorical figure of Rome which we met before; next to her a figure in a chlamys, perhaps Arcadius; then Theodosius, holding a shield in his left hand and obviously in the act of addressing his troops; a soldier behind holds a shield, and on his left is another figure in a chlamys, which I identify as Valentinian. The gables of this building are shown, and apparently it stood quite close to the river. A large ship with mast and ladder stays is in the offing, and soldiers march along the river bank. The scene is continued in the corresponding spiral (the sixth) on the east side. Another large ship approaches a fort guarded by three soldiers. I think the soldiers marching in single file are introduced merely for effect, and have no direct relation with those behind.

We return to the seventh spiral on the west side, where the same kind of scenes are repeated. In front, the troops march with, I suppose, the emperor on horseback in their midst. Behind, there is one large 'man-of-war' and two smaller craft. The scenes continue on the corresponding spiral on the south side. The soldiers in front are pikemen, and their leader, on horseback, carries a lance. Three more vessels are shown in the background. The same scenes continue on the east side. A figure on horseback, which must, I think, be the emperor, is escorted by soldiers carrying pikes. In the background there is another large ship, full of soldiers carrying shields; a small company of soldiers marches along the bank, perhaps embarking; the scene closes with a part of another ship.

In the eighth spiral on the west side the action begins. In the foreground the emperor and troops approach a fort or block-house. In the background is a sailing ship with troops, and another with oarsmen. The latter is, I imagine, the enemy. Two small figures in the extremity of the spiral are either engaged in fight or one is rescuing the other from the river. In the corresponding scene on the south side the foreground is occupied by rafts; boatmen are in attendance, and in one the commanding officer, holding a lance, is giving directions. A row-boat, and some soldiers on shore, are shown in the background. The next scene on the corresponding spiral of the west side shows boat-building operations; also a raft from which troops seem to be disembarking. Above this are some soldiers on shore, and a row-boat and a ship.

The ninth spiral on the west, south, and east sides shows the naval battle, and the scene explains itself. The drawing of the Roger Gaignière collection reproduced by Geffroy, supplies us with a detail. The hummocks shown by our artist on the east side are not waves but combatants in the river.

The main engagement illustrated in these three scenes consisted of two episodes; first, one attempted landing, which the Roman soldiers on the bank resisted. It will be seen that some of the figures in the stern of the vessel are represented in the act of hurling some missiles or brandishing swords. In the second episode the ships of the combatants are engaged broadside, and in the last the defeated enemy is floundering in the river. I interpret the last from the Gaignière sketch.

In the tenth spiral, on the west side, a landing party is disembarking. The castellated towers may represent the gates of a city, and part of a bridge is indicated behind them, upon which soldiers advance towards a group of figures clad in togas. This scene may be explained by the corresponding spiral on the south side, where the two sovereigns, seated on a kind of canopied throne, are

attended by soldiers and, to judge by their togas, presumably senators. This probably represents a review, or a levée, after the naval fight.

The scene changes abruptly into a battle on the river bank; the river is indicated by a ship in the extreme corner. This is one of the most spirited scenes in the series. The Roman soldiers apparently fought with pikes or lances, while their enemies used short swords or defended themselves with shields.

In the eleventh spiral, on the west side, the army resumes the march. The infantry are now accompanied by horsemen, all wearing short cloaks. In the corresponding spiral, on the south side, we have another spirited engagement, in which Roman cavalry play a prominent part; the enemy again is shown using shields and short swords. In the corresponding panel, on the east side, the army is again shown on the march.

In the twelfth spiral, on the west side, troops are marching in two files. In the corresponding panel, on the south side, we have another spirited engagement, and it will be noticed that this battle-scene is immediately above a similar scene on the spiral below. I have come to the conclusion that these battle-scenes were awarded a place of honour on the south side of the shaft of the pillar one above the other, representing a single engagement.

In the last spiral, on the south side, we come to the end of the military procession; just beyond an officer holding a lance are three figures in togas. In the corresponding spiral, on the south side, we have the final scene showing the coronation of the victor with a laurel wreath. In the last spiral, on the east side, we have a principal figure in uniform with lance and shield, attended by dignitaries in togas.

According to the editor of the Bellini drawings, the series concluded with some allegorical subjects, but these are not shown by our artist.

I now pass on to consider the bas-reliefs on three sides of the base; the artist, it will be remembered, explains that there was none on the north side, and he only gives a side view of that front of the base showing the door.

These reliefs are divided on each side into four tiers. The general arrangement, the garlands, cupids, figures of Victory, shields, crosses, and other incidental details sufficiently explain themselves. I shall therefore do no more here than draw attention to the historical scenes represented, and begin on the west side.

The upper tier does not call for comment. In the second tier we have two groups of figures. The scene represents the sovereigns attended by three persons clad in the chlamys and fifteen soldiers carrying lances and shields. Two of the last, one on each side, are decorated with the Constantinian monogram and Alpha and Omega.

The two principal figures, which I take to be the Emperor Theodosius on the right and Valentinian II on the left, are dressed in general's uniform and cloaks, which are thrown back over their shoulders. They carry lances and, to judge by other reliefs of the same kind on the south side, they hold in their extended hands little statuettes of winged Victory. They turn towards one another, and that attitude is also adopted by the three other principal figures in the scene. The soldiers face the spectator.

These three figures, I conjecture, represent Arcadius next to Theodosius, and, next but one to Valentinian, a minister, perhaps the acting consul for the year, since he is holding in his right hand the conventional scroll. His official toga is flung over his left arm. The figure between him and the emperor wears a chlamys, has long hair and a beard, and may be the patriarch Nectarius.

The scene in the third tier explains itself. A conventional trophy of arms occupies the centre, and below it are two kneeling figures. They hold shields in one hand and with the other seem to be offering a gift. Both wear pointed caps.

Next to them, two conventional figures of winged Victory lead by the hand two crouching figures, a woman on the right and a man on the left; in their other hands they hold sceptres. The scene here represented may have taken place in the Hippodrome. It will be seen that soldiers armed with spears and shields stand in line in the background, and facing the spectator and in front of them two groups of figures follow the conventional representations of Victory. The group of five persons on the left side advances in line with outstretched right hands. They are bare-headed and wear trousers and short woollen or fur tunics. The group of five on the right side is dressed in a different costume. The leader wears a pointed cap, a tunic and girdle, trousers, and a cloak thrown over the shoulders. He carries a cup or some circular object in both hands; the two figures next in order are similarly clad but have no caps and are empty-handed. The next figure wears a cap and is leading some animal, possibly a lynx. The last figure seems to be a woman. At the end of the lines of soldiers two figures appear under canopies supported on pillars.

The lowest tier explains itself and needs no comment. The three figures on the right wear peaked caps; one of them is a child, and another, obviously a prisoner, has his arms tied behind his back. On the left side a woman is holding a child in front of her, and another figure is represented in the act of supplication.

The arrangement of the reliefs on the south side is different from those on the west side. Various trophies, battle-axes of sorts, shields, a horn, standards, cuirasses, leg armour, a bow and quivers of arrows, and helmets are scattered

about the panel in disorder. In the second tier two flying angels support a laurel wreath enclosing the Constantinian monogram. Our artist was not, I surmise, acquainted with Greek characters, and here and elsewhere misrepresents the Omega. Trophies and shields flank the central group.

In the third tier we have a group of figures. In the centre the two emperors stand holding spears and statuettes of Victory. They are dressed in military uniform with cloaks. These Victories are represented as crowning the Augusti with wreaths. Between the sovereigns two kneeling and naked figures with their hands behind their backs represent prisoners. On the right side there are four officials wearing the chlamys. Behind them and at the end of the row are soldiers carrying spears and shields.

On the left side we have the consul holding the official scroll and wearing the toga. He is the only figure clad in a toga on this side; between him and the Augusti is another figure, wearing a chlamys, and standing in the background. This may be Arcadius. The remaining four figures beyond the consul wear the chlamys. The group ends with a soldier holding a spear.

In the bottom tier two figures of winged Victory advance towards one another; in one hand each holds a conventional 'trophy' and with the other leads, or drags along by the hair, two captives; a third figure, also a captive, crouches between the two figures of Victory. The rest of the tier is occupied by figures following the Victories. These figures wear crowns and long flowing robes, and carry boxes or plates in their hands. I suspect that these represent the cities visited by the sovereigns thus represented conventionally, and doing homage. I draw attention to the figures at the extremities. They carry lighted torches, and the last figure on the left side appears to be carrying some circular objects.

The reliefs on the east side again differ from the preceding. In the upper tier two flying angels support a rectangular shield. The latter contains a cross supported by two figures. The extremities of the tier are decorated with two cupids holding torches.

The second tier is divided up by pillars, one in the centre, two on each side in the foreground, and two more in the background. Between the central pillar and the two forward pillars on each side are two figures. Both are clad in togas. Their right hands are extended upwards, and they appear to be holding the mappa; each figure represents, no doubt, an Augustus, and is attended by a soldier carrying a spear and shield. On the left side a single figure stands between the forward and backward pillar, clad in a chlamys; it is the only figure so clad in this group, and may represent Arcadius; next to Arcadius, if Arcadius it be, is the consul, clad in the toga, carrying his scroll, and standing

in the attitude represented in the other reliefs. The two corresponding figures on the right side also wear togas. Beyond these principal figures, and on each side, are six soldiers carrying either palm branches or perhaps flags on poles; more probably the former.

We now come to the third tier. Nearly all the right side has been destroyed, but, to judge by the fragments remaining at the two extremities, I have no doubt that the reliefs were similar to those on the left side.

The chief figure, nearest the centre, wears a toga and a wreath and carries some object, probably a bowl, in both hands. This bowl was usually associated with an ecclesiastical ceremony and oblation. Beyond this principal figure, no doubt one of the Augusti, five figures clad in togas and carrying scrolls in their hands stand in a row facing the spectator. Five more figures stand in the back row. The line ends with figures in conventional classical costumes, standing under arched canopies. The lower tier, divided into three panels by two pillars, contains trophies. On the right side a child stands in front of a woman seated on the ground. Can this perhaps represent the Empress Galla and the young Prince Honorius, then two years old? On the left side a woman is seated on the ground in an attitude which suggests weeping. Two conventional figures, apparently representing the arts, conclude the tier at its two extremities.

The following short summary may conveniently conclude this paper.

Two principal and three subsidiary figures occupy the places of honour on these reliefs, which decorate three sides of the base of the column. The two figures are, no doubt, the two Augusti, the same who are represented in three scenes on the shaft, that is to say, first when the emperor is haranguing his troops before the naval fight, then at the review after it, when the two sovereigns are seated together on a canopied throne with their two attendant ministers standing by them on the throne steps; and then in the final scene, where one Augustus is crowned and the other sits by him as a spectator.

I have no doubt that these two figures are Theodosius and his brother-in-law, Valentinian II. I take it for granted that, whether actually present in the field or at the triumph which followed the victory, Valentinian would, as a matter of course, be represented on a triumphal monument of this kind, for, though divided into two dominions for administrative purposes, the Empire was one whole state, and represented by the two sovereigns. Moreover, there is no reason to assume that Valentinian was not present in the field and, in supporting his colleague Theodosius, did what Gratian, his brother, tried to do when their uncle Valens got into difficulties with his Gothic subjects in Thrace.

I have not much doubt as to the identity of two of the three subsidiary figures represented on these three sides of the base.

The figure in the chlamys on the west and south sides is no doubt the Caesar Arcadius. He is represented in that dress, not in a toga, perhaps on account of his age. He was then ten years old.

The figure in the toga holding the scroll in his right hand is certainly a high official, probably the consul, or rather acting consul, for Arcadius apparently held that high office in A. D. 386. Were this official dressed in military uniform we might have identified him with Promotus, the general, or perhaps Stilicho. It is unlikely that either of the court officials, as they then were, Rufinus or Eutropius, would have been represented so prominently.

The identification of the third prominent figure on the west side with the patriarch Nectarius is, of course, purely conjectural.

I am indebted to my father's and my own friend Professor Bury, for helping me to identify these reliefs with the victory won by Theodosius over Odothoeus, his Ostrogoths and Huns ; and to M. Jean Ebersolt's interesting book, already referred to, for notes and references on this and other columns in medieval Constantinople.

The column of Arcadius: south side, top

Latus Meridionale.
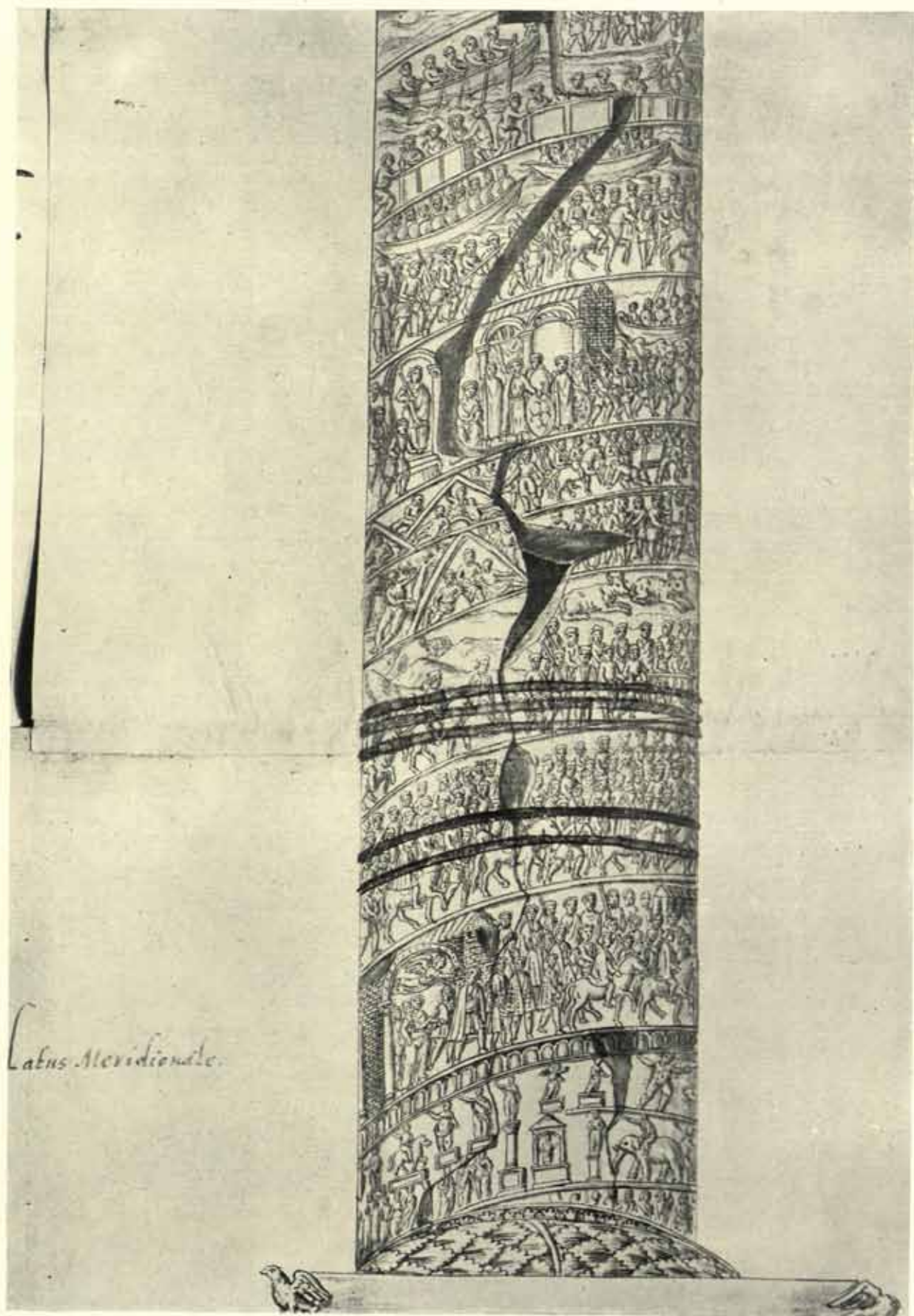
The column of Arcadius: south side, centre
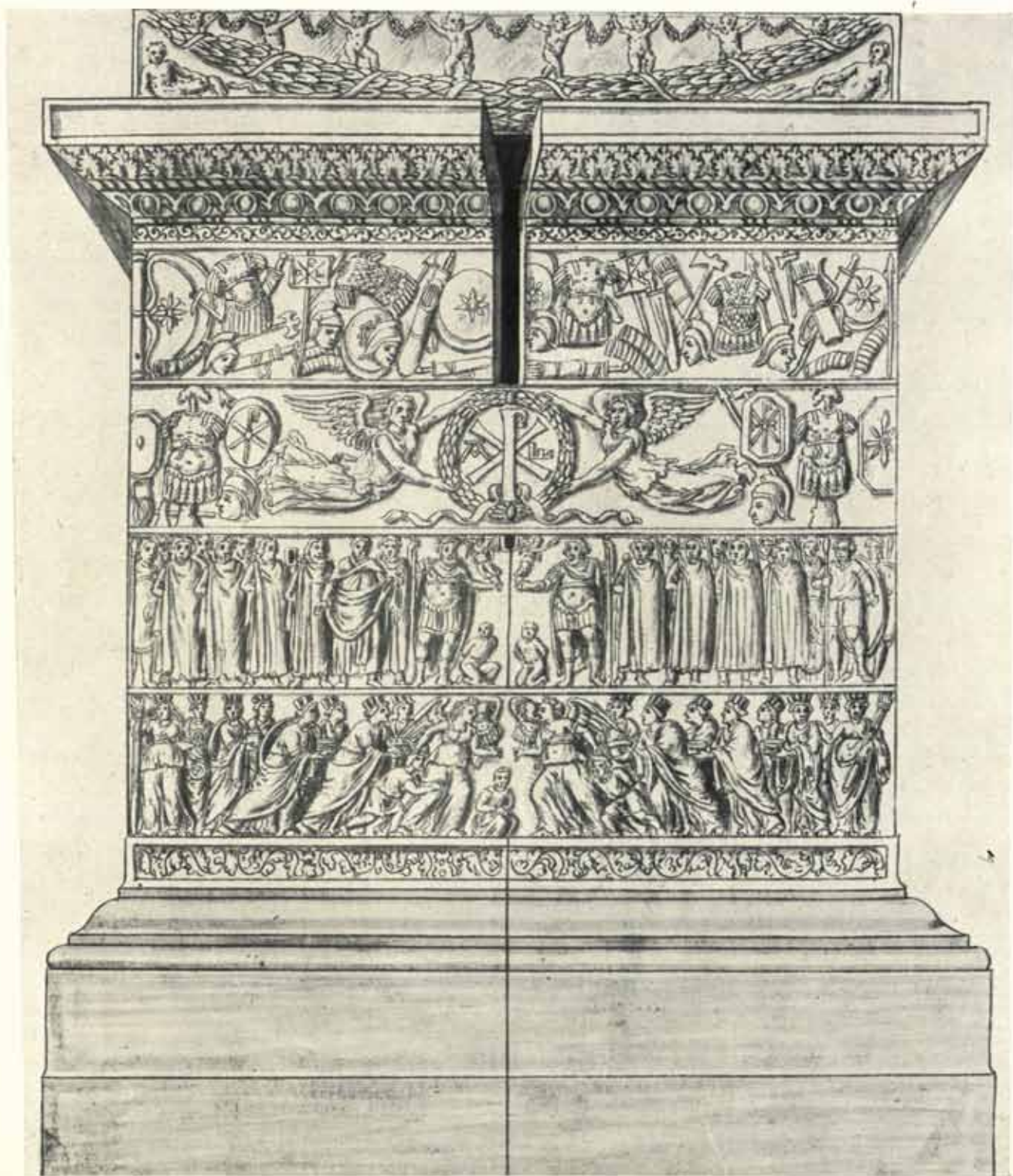
The column of Arcadius: south side, base

The column of Arcadius: west side, top

Columnæ cochlidis Arcadij. latus
occidentale.
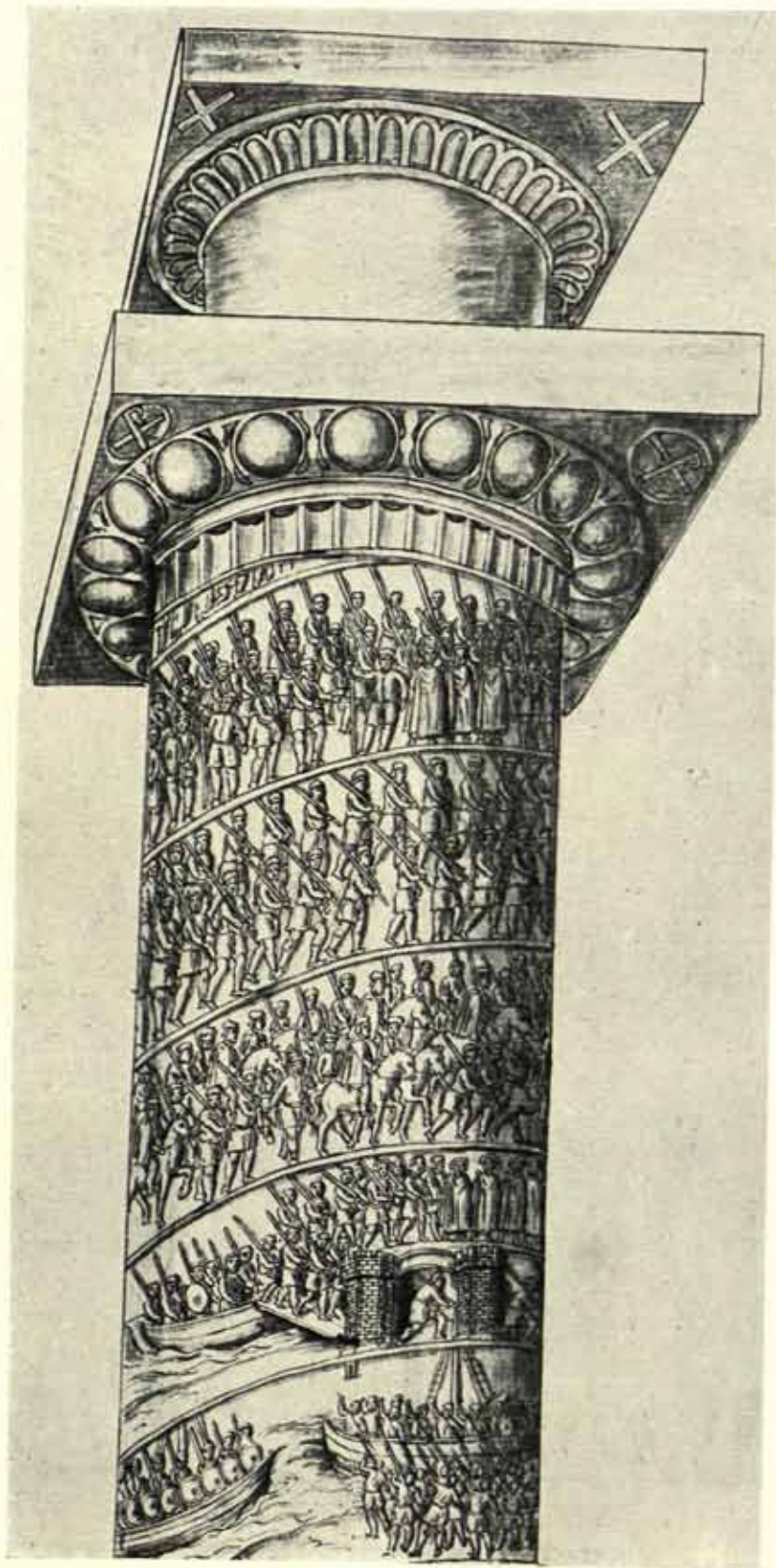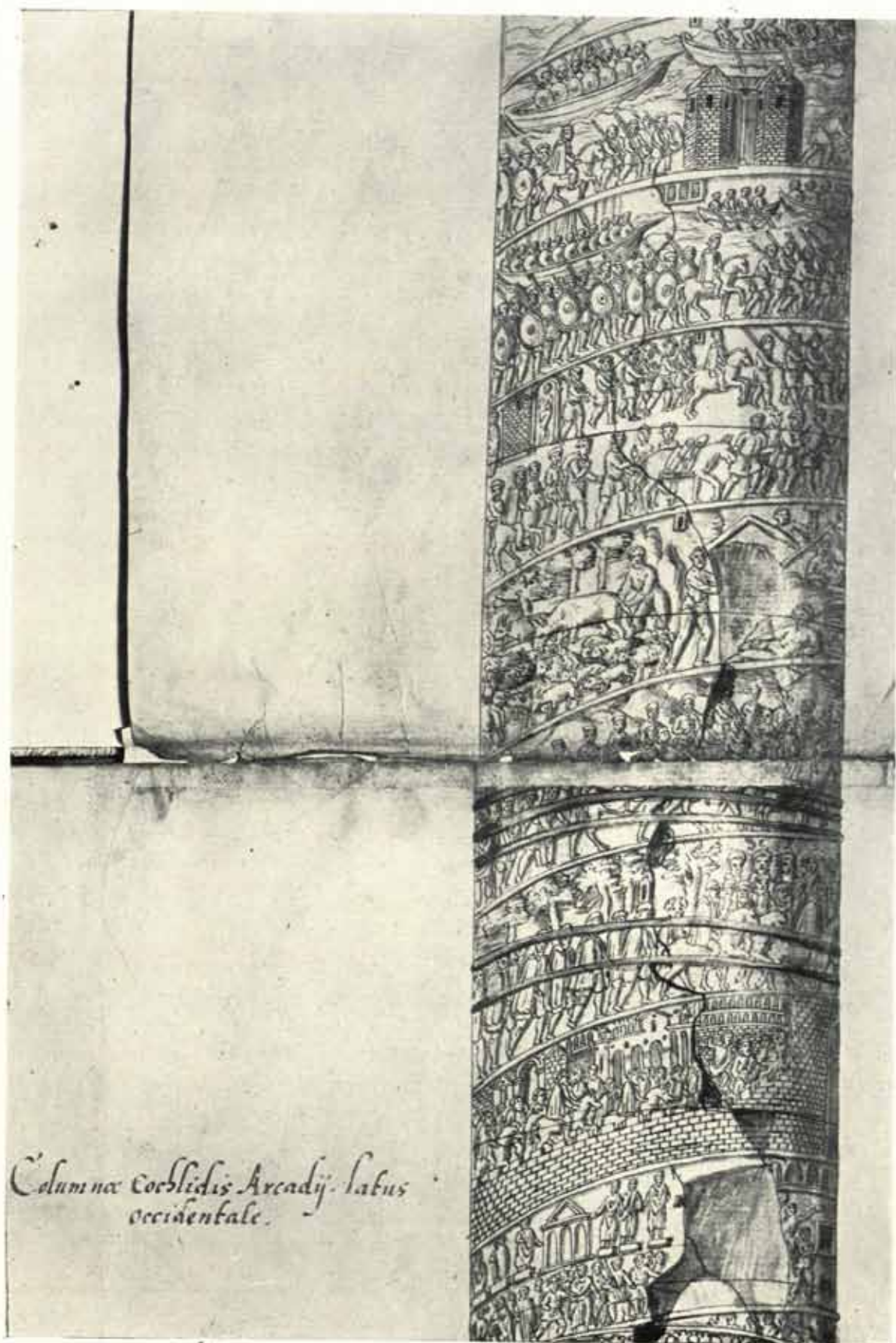
The column of Arcadius: west side, centre
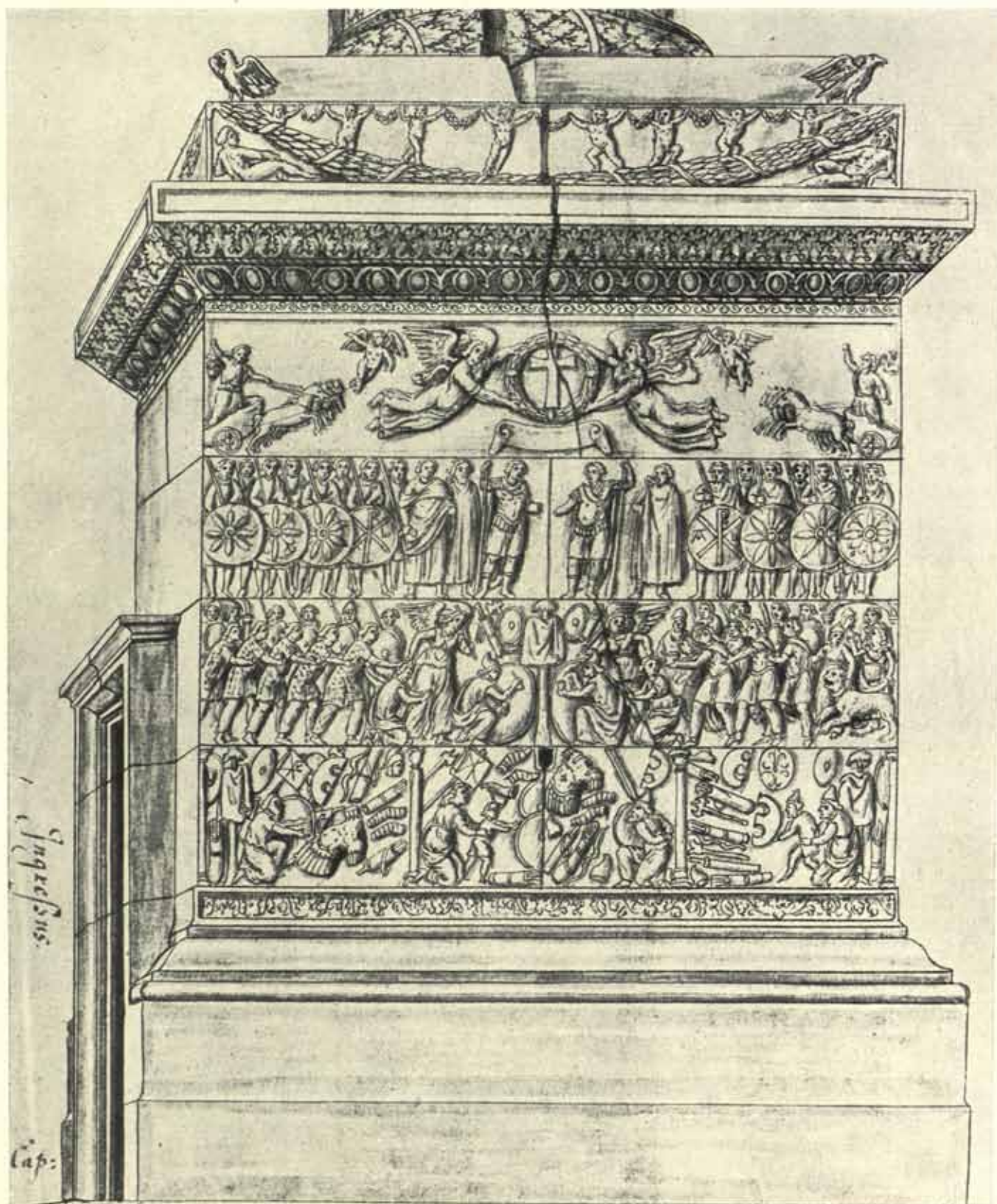
The column of Arcadius: west side, base
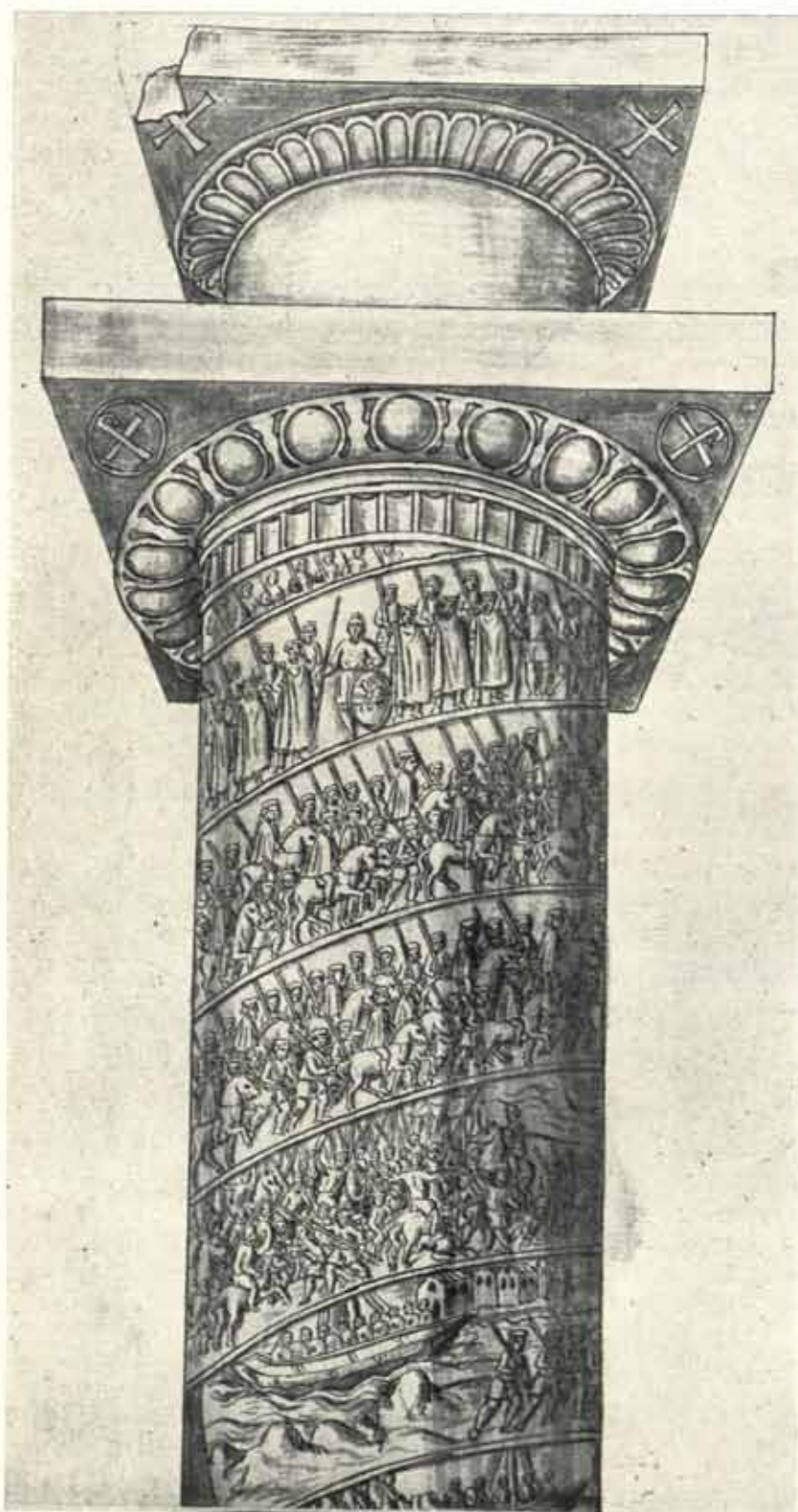
The column of Arcadius: east side, top

Latus orientale.
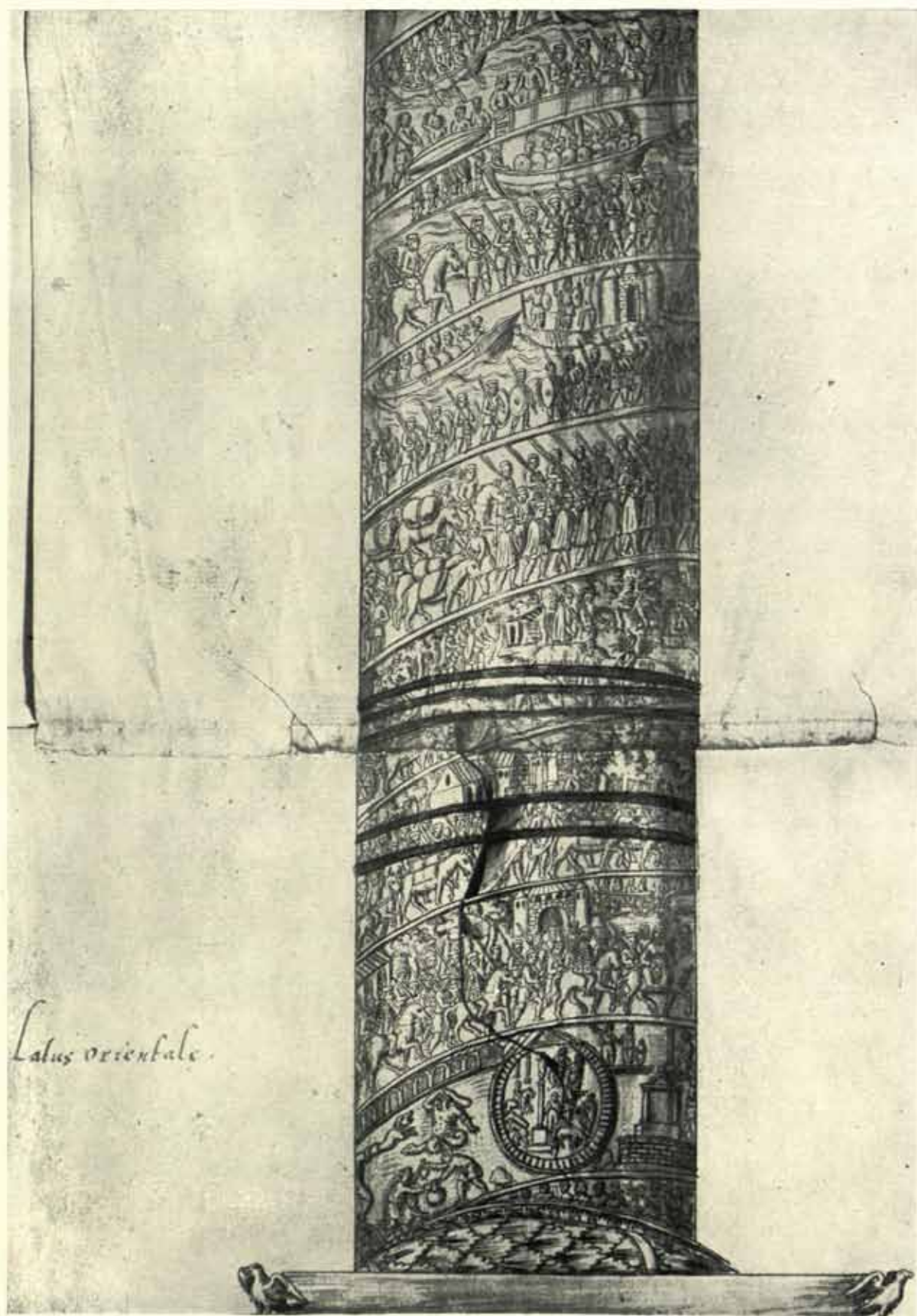
The column of Arcadius: east side, centre
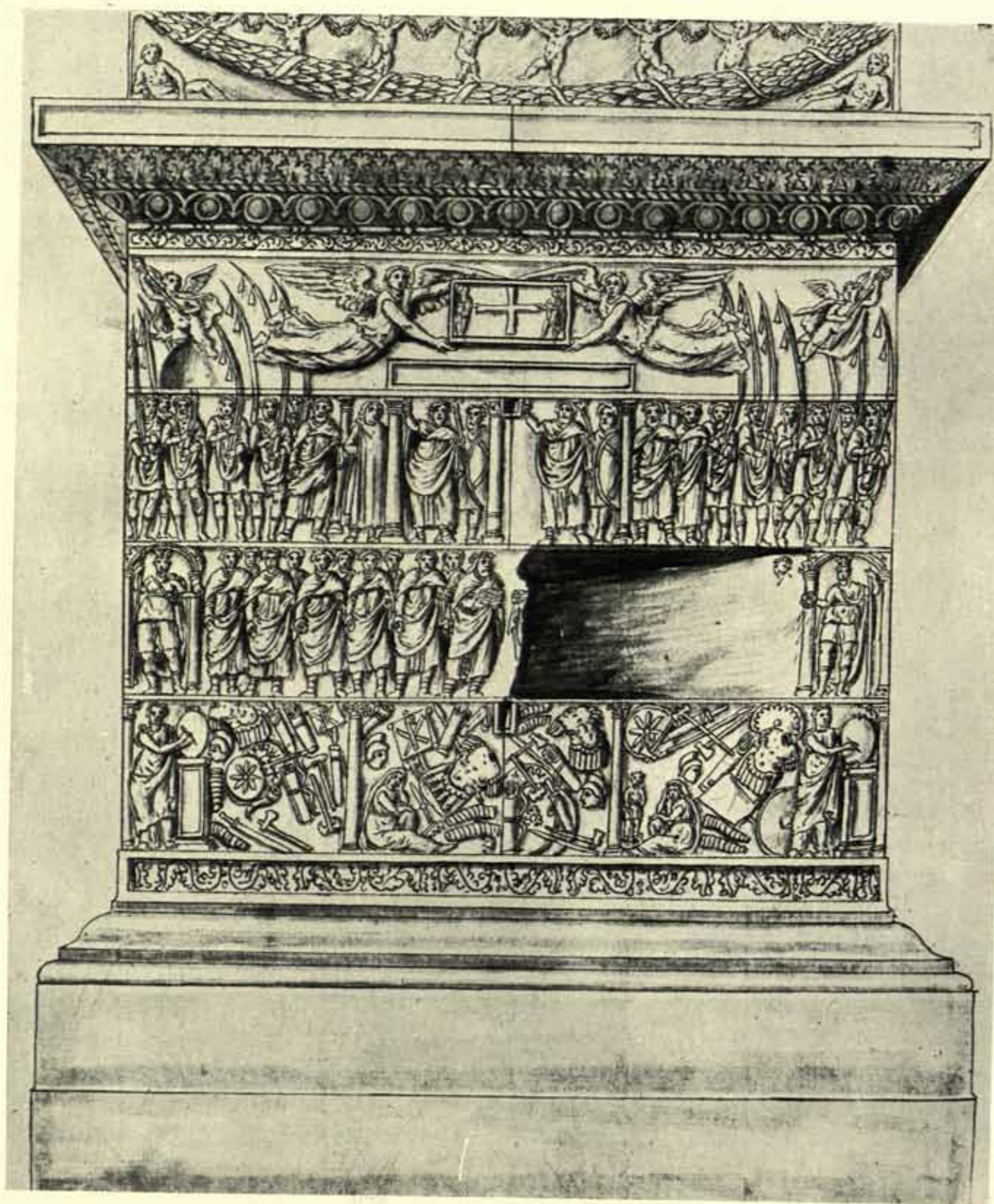
The column of Arcadius: east side, base

VII.—*The Monastery of St. Milburge at Much Wenlock, Shropshire. By the Rev.* D. H. S. CRANAGE, *Litt.D., F.S.A.*

Read 9th February 1922.

MOST religious houses in England were founded for a particular Order, and remained in connexion therewith till the Dissolution. Several early foundations, however, went through various changes and ended as Benedictine abbeys.

Wenlock apparently was first a house of nuns, founded late in the seventh century and presided over by St. Milburge, daughter of Merewald, the founder of Leominster Priory, niece of Wulphere, and grand-daughter of Penda, kings of Mercia. Of this we cannot be certain, for our earliest authority is William of Malmesbury, writing more than four centuries later. It is probable that this early house lasted till about 874 and was then destroyed by the Danes on their conquest of Mercia.

No doubt traditions of St. Milburge's abbey led to the re-founding by Leofric and Lady Godiva at a date which is not exactly known. Florence of Worcester refers scantily to the house, which was probably of the usual Saxon character—semi-monastic, semi-secular.

Real history begins with the founding of a great house of monks between 1071 and 1086 by Roger de Montgomery, the first Norman earl of Shrewsbury. It is possible that he intended it at first to be a Benedictine abbey, like his later house at Shrewsbury, but finally he decided to affiliate it to the Cluniac system. Within a few years of its foundation we find it a dependency of La Charité-sur-Loire, which was one of the five principal daughter houses of Cluny. It remained an Alien Priory till 1395, when Richard II declared it to be denizen. Its independence, however, of La Charité was not formally recognized by papal bull till 1494. Unlike the Cluniac house of Bermondsey it was never elevated to be an abbey. It is generally called an abbey loosely to this day. Bearing in mind its antiquity, long before Cluniac subjection, the inaccuracy may well be pardoned. For the title of my paper I have preferred the name by which it was often known in the middle ages, a name which survived for some time after the Dissolution.

The extent of its possessions, the names of the priors, and many other matters of interest are given in Eyton's *Antiquities of Shropshire*, iii, 224–53. To that wonderfully accurate book I would also refer for evidence of some of the historical statements I make in this paper. Wenlock was at one time wealthier than Shrewsbury, though of considerably less value at the Dissolution. It had a cell a few miles away at Church Preen. Dudley and Paisley were colonized from it, and the former remained affiliated to the end. St. Helen's, in the Isle of Wight, was also a dependency. I am mainly concerned with the architectural history, though other matters must necessarily be dealt with in the course of the paper.

The first question to ask is : Are there any traces of St. Milburge's buildings or of those of Earl Leofric? In most cases an early church is succeeded by later ones on the same site, often surrounding the early building, which was pulled down when the later one was finished. In this case, however, we cannot say for certain that the very site of St. Milburge's church was known to Earl Leofric. There is a curious silence about Leofric's church at the time, probably less than half a century later, when Earl Roger's church was founded. But, if we believe the records of William of Malmesbury, the site of the later church must be the same as that of the earliest. He tells us that when Earl Roger's church was begun a boy was running in hot haste over the ground, when the grave of the Virgin was broken through and her body disclosed. 'A fragrant odour of balsam breathed through the church, and her body raised high wrought so many miracles that floods of people poured in thither. Scarcely could the broad fields contain the crowds, whilst rich and poor together, fired by a common faith, hastened on their way. None came to return without the cure or mitigation of his malady, and even King's evil, hopeless in the hands of the leech, departed before the merits of the Virgin.'[1]

We may think that this account has a suspicious resemblance to other convenient monastic miracles of the Middle Ages, but it is surely probable that some tradition of the site of St. Milburge's church governed the choice of Earl Leofric and Earl Roger. When therefore in the early autumn of 1901 I was invited by Mr. Milnes Gaskell, the late owner, to do some excavation, I naturally thought first of the possibility of finding St. Milburge's church and that of Earl Leofric.

The excavation was begun on Friday, 30th August 1901, on the site of the central tower. Foundations of the *pulpitum* were immediately discovered 3 in. below the soil. As was often the case, there were two walls supporting it.

[1] *De Gestis Regum*, lib. II, cap. 13, vol. i, pp. 267, 268, Rolls Series. Translation by M. E. C. Walcott in *Four Minsters round the Wrekin* (1877), p. 76. This book is seriously inaccurate, but is valuable for its references to original authorities.

The western one joins naturally to the western piers of the central tower, though it cannot now be proved that it is coeval with them. Other footings of the same depth below the soil and dating from the end of the twelfth century or later are shown in fig. 1, the plan of the excavations. This is not a very tidy production, for I have shown exactly what was found and no more, except a few necessary continuation lines.

East and west of the *pulpitum* are walls of a different character, from 8 in.

Supposed 7ᵗʰ Century.........
Late 11ᵗʰ Century.........
15ᵗʰ Century.........
Mediaeval Foundations.....

Scale of feet
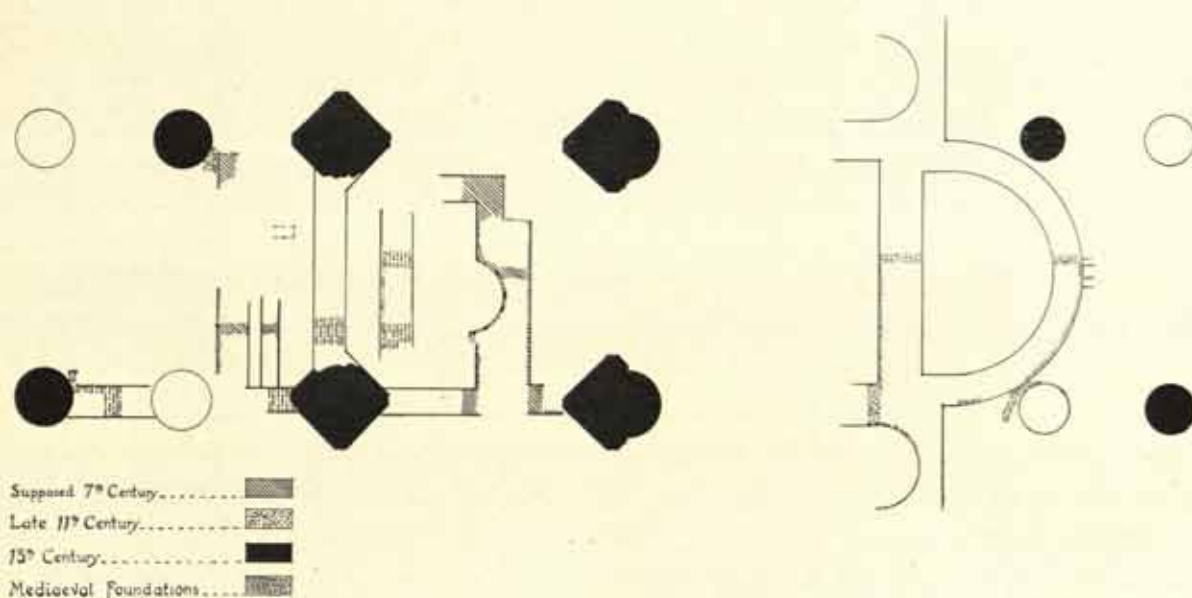
Fig. 1.   Plan of excavations of 1901.

to 1 ft. 6 in. below the soil. The eastern wall has a rough apse on its west side, but the east side is unbroken in the centre. From this a north wall proceeds westwards in normal fashion, but, on the south side the thick wall continues farther and then has an east, as well as a west, extension. Coeval probably with all this are two parallel walls west of the *pulpitum*. The north corner of the western wall does not align with the north wall already referred to.

I cannot pretend that the form and relation of these walls conclusively prove anything, but probability points to their being part of St. Milburge's church. Professor Baldwin Brown kindly came to Wenlock to see the excavations and agreed with me on this point. Mr. J. T. Micklethwaite was unable to come. The type of apse used, internal and not external, is not unknown in pre-Conquest times. The roughness of the foundations, difficult to portray on a plan, is not surprising in seventh-century work. The extreme length of the building which would be contained by the walls is 38 ft. and breadth 28 ft. I cannot explain

the double wall at the west nor the non-alignment of the north-west corner. The south-east extension may have connected the church with the conventual buildings.

Unfortunately we know very little of the form of a Saxon monastery. The early ninth-century plan of St. Gall in Switzerland has come down to us. Its claustral buildings were very similar to those of medieval times, except that a projecting chapter-house was notably absent, but at Wenlock we are dealing with a much earlier period and an out-of-the-way district. The church may well have followed the Roman apse tradition, but the conventual buildings were probably rude erections on no very definite plan. I do not despair of future excavations supplementing those of 1901 in the solution of the problem. Mr. Gaskell invited me to continue the work in 1902, but other engagements prevented.

Having presumably traced a part of St. Milburge's church, one naturally looked for Earl Leofric's. So far as I could discover there is no sign of it. From two to three bays east of the central tower good foundations, about 1 ft. 6 in. below the soil, were found of a great central apse, and of a small apse south of it, corresponding to which there was doubtless a northern apse. An unusual feature is the thick wall across the chord of the central apse. This is not a common feature of late eleventh-century work, and Mr. A. W. Clapham suggests that it corresponds better with earlier times and thus points to the apses being part of Earl Leofric's church. My own view is that we have here the east end of Roger de Montgomery's church, which we know to have been begun about 1080 or rather later. On 26th May 1101 the relics of St. Milburge were translated to a spot in front of the high altar. No foundations of a shrine were found in such a position, but they may well have been removed when the church was extended eastwards a century later.

Many human bones were discovered during the excavations, but only one complete undisturbed skeleton. It was that of a very big man, the head being 10 ft. east of the cross wall and the feet nearly reaching to the apse. The skeleton was replaced exactly where it was found. On the outer side of the apse there was a roughly shaped grave of stones, but no bones were found therein.

A nice sepulchral slab, of late thirteenth- or early fourteenth-century date, was found, face downwards, just west of the central tower. It is preserved in the narrow building east of the cloister.

THE PRESENT CHURCH.

It is time now to come to the later church, which is not less than 350 ft. in length (pls. XXIV and XXXIV). The nave and aisles were of eight bays,[1] separated

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[1] Lord Forester has kindly lent me a valuable MS. in his possession, the Register of Roland Bruge or Gosenell, prior of Wenlock early in the sixteenth century. Under date 1521 it speaks of

Fig. 1. General view from north-west

Fig. 2. South transept

Fig. 2. South aisle of nave
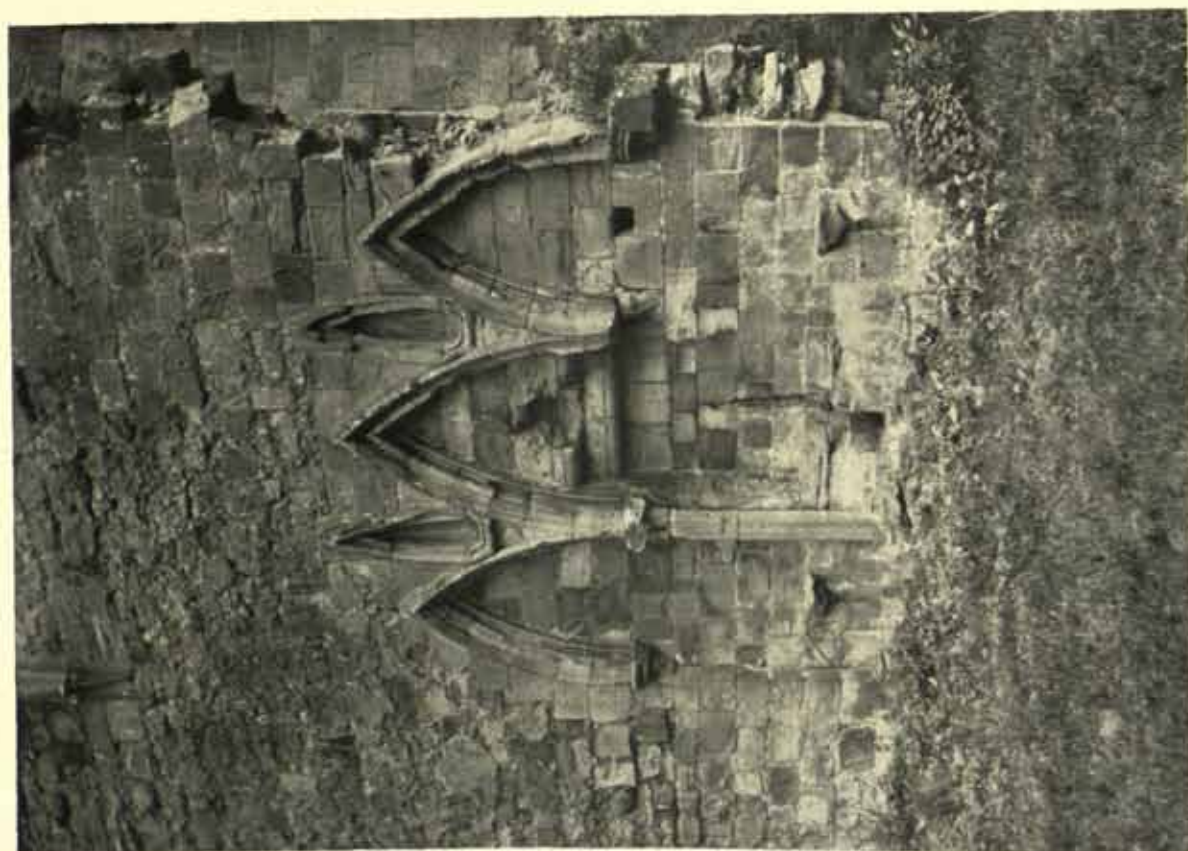
Fig. 1. Lavatory in south transept
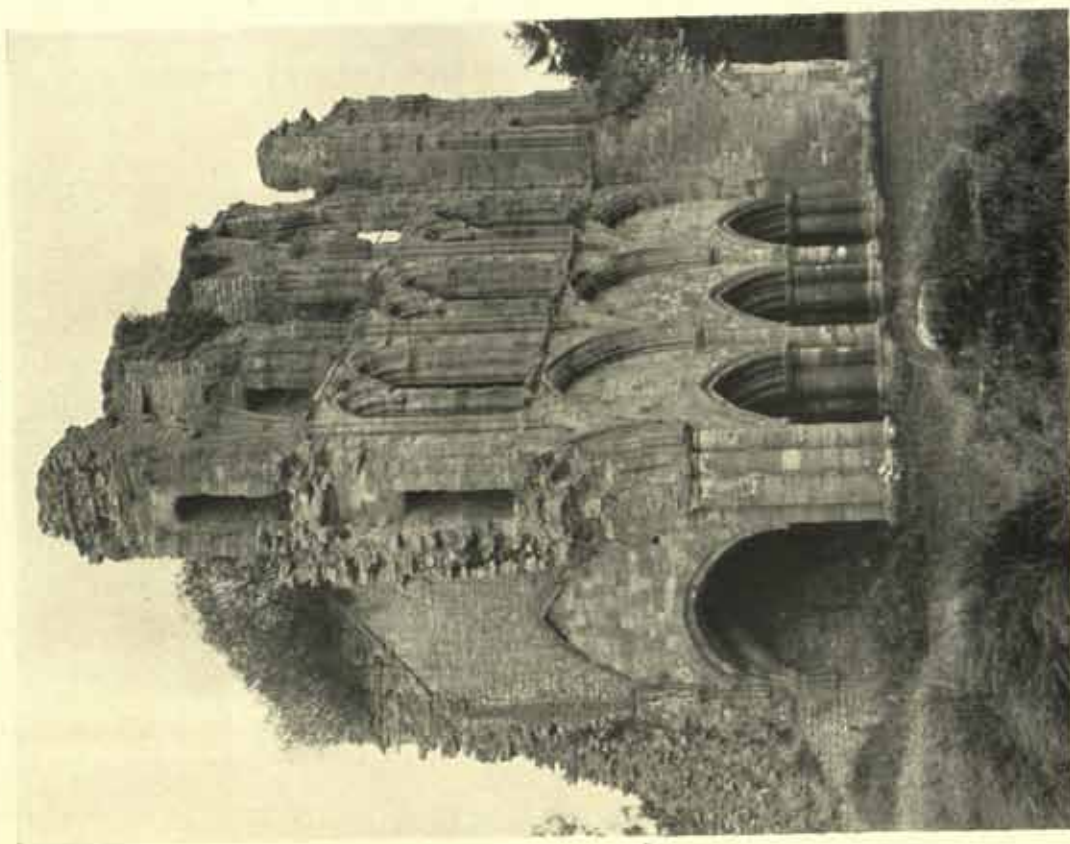
by the central tower from the eastern arm, with aisles of seven bays : the north aisle may have been extended northward in its eastern part. South of the south aisle was an heptagonal sacristy,[1] which has a wall east of it, running north and south, but revealing no indication of its original extent or purpose. Each transept had three chapels on its eastern side. There was a porch on the north side of the nave. As we proceed we shall see that most of this work probably dates from the first half of the thirteenth century, though it may have been begun at the end of the twelfth. The Lady chapel, at the extreme east, is a hundred year later, as the form of its basement moulding indicates.

The north transept is much ruined, but its west wall retains part of the staircase turret and also the triforium and one window of the clerestorey. There are two vaulting shafts, starting below the triforium string-course. The capitals of the mid-shafts of the triforium arches are very unusual, with ring mouldings and no necks. The west side of this west wall has three lofty arches, which form square-edged recesses: the southernmost was connected with the transept by a doorway, which has an equilateral arch on the east and a segmental-pointed arch on the west. The three great arches formed the east side of a vaulted chapel over a crypt, approached from the north aisle. There can be little doubt that we have here a charnel-house, which was no uncommon feature of a large conventual foundation. It should be pointed out, however, that no bones were found in the crypt where it was dug out in the last century. The two northern recesses would no doubt have altars, at which masses would be said for the souls of deceased monks. At Worcester the charnel-house was a large establishment with four chaplains, one of whom was *magister* : the number was afterwards increased to six. The chapel was a separate building, on the north side of the cathedral church, with a living house west of it.

The architectural system of Wenlock Priory church is now best seen in the south transept, which is excelled by few medieval buildings in dignity and proportion (pl. XXIV, 2): its total height is over 70 ft. There is little ornament, but the mouldings are refined and well cut. The pointed bowtell, so common about the year 1200, is used on the piers alternately with the round. The abaci are undercut. The necks, with their semi-hexagonal moulding, are reminiscent of the twelfth century. The bases have slight water-hollows. The connexion with La Charité did not bring in French influence at this point, for the architecture is pure English with corbelled vaulting shafts and stiff-leaf foliage.

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re-glazing and re-whitewashing a part of '*navem ecclesie vulgariter vocatam* Newe churche'. The nave was built some 300 years before this was written, and it is very remarkable that the term 'Newe churche' should have survived so long.

[1] The date of this is uncertain, but the forms of the buttresses suggest that it was an addition of the fifteenth century.

Clear evidence of the existence of earlier buildings is given by the way the south wall is treated. The chapter-house south of it, as we shall see later, dates from Norman times, and the central tower must be on the axis of Earl Roger's church. The eleventh-century transept may well have had no aisle and its length therefore had no necessary connexion with the breadth of the eastern arches. When the transept was rebuilt it was desired to have an aisle, or chapels, leading out of it. There was not sufficient room for the three arches and the southernmost arch had therefore to cut into the older south wall in a curious manner. The southernmost bay of the triforium had to have narrower arches than the others on both east and west sides. A fine architectural composition was superimposed on the south wall. On the ground story are two equilateral blind arches with a quatrefoil between. Then come the triforium with three arches; the clere-storey with three windows, the central one of great size, all clear of the roofs south of them; and a narrow lancet above the vault and below the outer roof.

The eastern aisle, like other parts of the church, was vaulted. Vaulting shafts, engaged at certain points, came down east of the two central piers.

There were probably screens shutting off the bays, so that the aisle would consist of three chapels. In the south wall is a recess with an unusual type of arch,[1] a combination of the trefoil and shouldered forms: there is no piscina basin. No windows remain.

The west wall is chiefly remarkable for the lavatory, which still shows the holes for the supply and waste pipes and for the towel-rail (pl. XXV, 1). There are three lancet-arches with curious narrow recesses in the spandrels. The trough was supported by corbels. Ceremonial lavatories are not unknown inside churches, but they are far from common and this is one of the best examples still remaining.[2] At the north end of this west wall is a stair turret for reaching the triforium and clerestorey, and no doubt the central tower as well.

Besides the transepts, the only part of the church where there are much more than foundations remaining is the three western bays of the south nave aisle and a small portion of the west front (pl. XXV, 2). The great west door-way was of five orders: the inner one, a massive continuous roll and fillet, the other four on shafts. The inner arch was segmental or segmental-pointed. The south jamb of the great west window is intact with a fine suite of mouldings, both internal and external. South of it are the much-ruined remains of trefoil-arched arcades in three storeys. The west front is a very beautiful piece of ashlar in red, white, and grey sandstone. The plinth shows a succession of slopes,

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[1] Excellent drawings of this and many other features are to be found in James Potter's book on Wenlock Priory published about 1851.
[2] There is another in the same county, in the south aisle of the parish church of Ludlow.

as is often the case in early thirteenth-century work. Fifteen inches south of the doorway this is broken into by a vertical chase, 16 in. broad. Six feet five inches farther south is a similar chase 22 in. broad. These holes may conceivably have been made to accommodate a platform for mystery plays, but there is no evidence on the point.

To judge from the remaining bays of the south aisle the nave must have been a splendid piece of architecture. The main arcade is of drop arches, with a pair of triforium arches above each. Between each pair is a vaulting shaft with capital of stiff-leaf foliage, and corbel tapering into the spandrel below. The clerestorey shows a distinct advance on the transept. The openings are no longer plain lancets, but two-light windows with uncusped tracery.[1] The roll and hollow on the main arches are so combined as to resemble the wave moulding of the fifteenth century, but the resemblance is only superficial. The date must be about the second quarter of the thirteenth century. Dame Agnes Clifford, in her will made before 1221, bequeathed *ad fabricam ecclesie de Wenloc 2 marcas*, but this probably refers to the parish church, where there is a fine thirteenth-century arcade.[2]

I must now deal with the feature of the south aisle, which may probably, without exaggeration, be described as unique. The three drop arches facing the nave, nearly 21 ft. in height, are blocked up in their upper portions, the masonry resting on slightly stilted segmental-pointed arches, just over 11 ft. high (pl. XXV, 2). The next drop arch eastwards was open in the usual way, but there is a low arch, at right angles to it, terminating at the east the three bays of the aisle. At the level of the low arches the bays have ribbed vaulting, with bosses but no ridge ribs. The cells are domical, but the stones are laid in the English and not in the French way. The recess west of the bays has a pointed barrel vault over a window whose outer arch is almost semicircular. Such a form is natural enough under a low vault and is not an indication of earlier date: its dripstone is undercut and its shafts have stiff-leaf foliage.

The blocking and low vaulting are not an afterthought, but carefully thought out in connexion with the high arches and vaulting. The reason is that an upper chamber was desired for this part of the aisle. Many of our great churches have upper storeys at the back of the triforium arches and above the aisles, but they are quite different from this one. At Wenlock the floor of the

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[1] The tracery has sadly perished since the drawings were made for Potter's book in the middle of the nineteenth century.

[2] The Rev. H. E. Salter has kindly looked up the reference at the Bodleian Library in the Dodsworth MSS., lxviii, 91. There is a gift to the priory of Clifford, and another to the church of Hagneby, where there was no religious house. It is evident, therefore, that the 'church' of Wenlock was the parish church.

chamber is much lower than the eastern part of the aisle vault, and the chamber itself is a finished piece of separate architecture and not a mere division of a triforium gallery. Like the aisle below, the chamber has three ribbed bays and a narrow bay with pointed barrel vault. Here, however, there is a ridge rib running east and west, an addition which was often made in fine English buildings early in the thirteenth century. The shafts are similar to those of the nave, with most beautiful stiff-leaf capitals. The windows are of two lights with an uncusped circle pierced in the plate above (pl. XXVI, 1). The chamber is approached by a doorway at the south-west with segmental-pointed arch. Opposite is the doorway, with lintel and relieving arch, to the newel which starts at this level and leads to the triforium and clerestorey and to the wall-passage east of the great west window.

There can be no question of the beauty and completeness of this upper chamber, but when we come to consider its purpose we are faced with great difficulties. The main approach is through the western range of the claustral buildings, which, at Wenlock as in many other houses, was probably devoted partly to the needs of guests. It is about 2 ft. above the level of the first floor. The chamber, with its south aspect, would have made a beautiful guests' parlour but for the entire omission of a fire-place. Such a convenience, of much earlier date, is found in the eastern range. We can scarcely suppose that guests were left without artificial heat or condemned to the discomfort of a brazier in the middle of the room. There was often an office or checker for the cellarer of the monastery in connexion with the western range, but this room is surely too noble for such a purpose and too secluded. Apart from access to the newel there is no connexion with the church, such as a squint, which might suggest that it was a watching chamber. There is no piscina or credence recess. The Cluniac Customs provide that the doorkeeper shall sleep near the main doorway.[1] This room, though far too grand, would be convenient enough for that purpose if the newel started from the ground, but it does not.

Was it a library? Monastic book-cupboards in the twelfth century were normally placed in the cloister, generally in the east walk. In later times, when books had greatly increased in number, another part of the buildings was fitted up [2] or a special library was erected.[3] At Wenlock, however, there are strong reasons against the theory. First of all, as we shall see presently, there is a room in the normal library position, north-east of the cloister. It is unusually

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[1] See *Vetus Disciplina Monastica*, ed. Herrgott, 1726, Pars I, cap. lv, p. 250.
[2] Part of the space over the south nave aisle at Worcester is said to have been fitted up as a library in the fourteenth century.
[3] At Durham, the library, built in the fifteenth century, is over the slype between the church and the chapter-house.

large, probably larger than any other in England of its period. The upper chamber of the aisle was built only a few years later, and one cannot suppose that further accommodation had so soon become necessary. The recesses in the north wall would not be specially convenient for book-presses, for they are splayed at the sides and not square-edged (plan, pl. XXXIV). There has been too on this side, as well as probably on the south, a low bench-table.

I think that the possibility of the room being a *scriptorium* should not be ruled out. There is plenty of evidence, documentary or architectural or both, to show that the *scriptorium* was frequently in the walk of the cloister next the church, as at Westminster, Durham, Chester, Gloucester; but we cannot be sure that this was the invariable position. It seems to me highly probable that the upper storey of the cloister at Norwich was partly devoted to the *scriptorium*. The north walk was unglazed and we can scarcely suppose that the Norwich monks would put up with such an arrangement at a time when their brethren at Gloucester and elsewhere were writing in comfortable carrells. Unfortunately the western range at Wenlock is so ruined that we cannot tell if there was a convenient staircase from the cloister to the upper doorway above mentioned, but I would suggest that it is by no means unlikely that a specially fine *scriptorium* was built here, just as a specially large library had been built a few years before.[1] It is interesting to recall a record of much later date (1489) of a monk of Westminster who applied to the Abbot to be transferred to Wenlock: he was received there as a 'maker of capital letters'.

The Cloister and Claustral Buildings.

There is not much left of the cloister itself, but the inner walls can be traced to some extent on the north and east sides. There is at least one tomb in the east walk. The line of the north roof was just below the windows of the

[1] In Blomefield's *History of Norfolk*, ii, 520, referring to Wymondham Abbey, there is a curious statement as to the 'south isle, over which, till the Dissolution, the monks' lodgings were joined to the south side of the church'. The authority for the statement is not given, and it is difficult to understand what is meant by the monks' 'lodgings'. The nave aisle at Wymondham is much later than that of Wenlock.

Mr. A. W. Clapham calls my attention to an unusual upper chamber at Bella Pais, a house of Premonstratensian canons in Cyprus. It is described in the *Transactions of the Royal Institute of British Architects*, 1882-3, pp. 18, 26-28: see especially figs. 49, 50, 54. The church has transepts and nave aisles of two bays. Over the eastern bay of the north aisle is an upper chamber connected with a building at the west of the cloister, here on the north side. This building was probably the lodging of the head of the house. The chamber is differentiated from that at Wenlock by this fact, by a newel which approaches it directly from below, and by a small window looking on to the nave. The vaulting of the aisles is the same throughout, and not lower in this part as at Wenlock : there is a west window. I presume that the chamber was a private chapel for the head of the house, with a window to enable him to join in the worship below.

south aisle chamber (pl. XXVI, 1); the string-course is shown on the buttress west of them, and the supporting corbel remains in the north-west corner. The roof string-course is also clear at the north-east and one or two of the supporting corbels (pl. XXIV, 2).

There were two entrances to the church from the north walk. The eastern has quite disappeared. It was the chief 'church-door' from the monks' point of view: the western remains, a beautiful piece of detail (pl. XXVI, 1), with drop arch and segmental scoinson. Its exact position is a matter of some interest. Such a doorway is normally in line with the west walk, but, owing to the fact that the west range of the cloister projects eastward of the west front of the church, the doorway cannot be in the last bay of the aisle. It is placed in the last bay but one, not in the middle, but as far west as possible, right against the buttress which the architectural system involves. There is a little space between it and the next buttress, which has been removed.

The east wall of the western range is shown against the church, and there are some foundations of its west wall.[1] It is clear from these that the ground storey was divided into several chambers. Places for stores had to be provided in the *cellarium*, and also in many cases the outer parlour where the monks could see their friends. The foundations projecting on the west side may have been connected with the cellarer's checker or with an outer staircase.[2]

South of the western range, and projecting westwards from it is a chamber, formerly vaulted, which was no doubt the kitchen.

The frater, or *refectorium*, is immediately east of it, a fine hall 100 ft. long and 30 ft. wide. It is parallel with the cloister walk opposite the church, according to the invariable rule in all Orders except the Cistercian. I cannot explain the decided southward slope at the east, as compared with the church, and can only suppose that it was determined by the position of some earlier buildings. The doorway, as usual, is near the west end. It is a fine piece of thirteenth-century work (pl. XXVI, 2), like the doorway of the church opposite to it. A corbelled vaulting shaft remains in the north-west corner, outside of which is one of the buttresses which received the thrust. This buttress, like the opposite one against the church, was inside the western range. In the west wall are two large round-arched recesses. There is no hatch, as is sometimes found in this western part. There was presumably a screen east of the door-

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[1] In Mr. Worthington's plan, measured in 1884, there is a western projection at the north-west corner, which has a return wall some 17 ft. west of it going northwards. This suggests a great narthex or galilee to the church, but there is no other indication of such a feature, and the wall must be part of some domestic building attached to the western range.

[2] Roland Bruge's Register, referred to above, speaks of a *receptorium*, which may mean the cellarer's checker.

Fig. 1. Room above south aisle of nave

Fig. 2. Cloister lavatory and frater doorway

Fig. 2. Panel of cloister lavatory

Fig. 1. Panel of cloister lavatory

way, but the ruin of the south wall has obliterated any evidence there might have been of a connexion, on this side, between the frater and the kitchen.

The rule of plain living was stricter in the Cistercian Order than in the Cluniac. Customs varied, however, at different times and in different houses. Guyot de Provins, the thirteenth-century minstrel, who became a monk of both Clairvaux and Cluny, evidently found the Cluniacs quite strict enough. He says about them:[1]

> When you wish to sleep, they awake you : when you wish to eat, they make you fast. The night is passed in praying in the Church, the day in working, and there is no repose but in the Refectory : and what is to be found there? Rotten eggs, beans with all their pods on, and (*boisson des bœufs*) liquor fit for oxen. For the wine is so poor (*mouillé*, watered), that one might drink of it for a month without intoxication.

The lavatory was a fine octagonal building at the south-west corner of the cloister-garth. Its south and west cardinal faces do not appear to have been attached to the cloister walls near them. The entrance was evidently in the south-west oblique face, though we cannot now tell exactly how it was connected with the walks. It is symmetrical, in alignment, with the church and not with the frater. It is decidedly earlier than the latter and must have been used in connexion with the preceding frater, which was presumably built soon after Roger de Montgomery's church. The material is fine hard Wenlock limestone or marble, very different from the sandstone which is the usual facing of the priory. It has been uncovered only since 1878, but the stone seems as if it would stand any amount of exposure to the weather. The arrangement of the structure will be seen in the plan and in pl. XXVl, 2. All round the outside was a double row of columns to support the roof. Then came the passage and the actual laver, cut across down to the ground from north-east to south-west. There are remains of the circular trough. The arrangement must have been similar to that at Durham, where [2]

> within the Cloyster Garth, over against the Frater House door, was a fair LAVER or CONDITT, for the Monncks to washe ther hands and faces at, being maid in forme round, covered with lead, and all of marble, saving the verie uttermost walls. Within the which walls you may walke round about the Laver of marble, having many litle cunditts or spouts of brasse, with xxiiij cockes of brasse, round about yt.

The two best columns have been set up some 30 yds. farther east. The form

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[1] *Les Œuvres de Guiot de Provins*, ed. J. Orr, pp. 60, 61 ; Manchester University Publications, 1915. The translation is quoted from Fosbrooke's *British Monachism*, ed. 1817, p. 107.
[2] *Rites of Durham*, Surtees Society's edition of 1842, p. 70.

of the capitals and bases, and the shell-like foliage freely used, point to a late twelfth-century date, probably *circa* 1180.

Two panels, on the walls of the laver, are of special interest (pl. XXVII, 1 and 2). One has two round arches under a containing arch. A bearded figure holds a book with his right hand. The other figure has the left hand under the chin, and the left elbow is supported by the right hand. The other panel has a trefoil arch and shows two boats and several figures. The identification of neither panel is very clear, but the second perhaps indicates, in the upper part, our Lord asleep in the boat, and, in the lower, the incident of St. Peter walking on the water.

We now come to the eastern range, which begins, at the north, with the remarkable chamber of three bays I have already referred to. We cannot prove that it was a library, and the recesses in the east wall now show no signs of book-presses, but this was the normal position. The unusual feature is the great size for such an early date.[1] There were 570 volumes at Cluny in the middle of the twelfth century, and it is not inconceivable that a good-sized room for books was required at a daughter house half a century later.

The chamber consists of three vaulted bays, the north and south of which are nearly perfect. In the east wall are three fine tall arches, similar to those in the chapel over the charnel-house. Under the northern arch are signs of the drain which served the lavatory in the transept. Of the entering arches only the middle one is intact: like the rest of the detail it is of early thirteenth-century character, or even late twelfth, with a flat buttress on either side (pl. XXIV, 2). The window high up, which cleared the cloister-roof, appears to have been intended from the start to help the lighting of the library.

The fragments which are kept in the chamber include the floral cross, found in 1901, capitals of the twelfth century, dog-tooth carving, and a number of medieval tiles.

The chapter-house is a noble room immediately south of the transept (pls. XXIV, 2 and XXVIII, 1). It is of pure Norman character and was built some fifty years after Earl Roger's church. It may have been separated from it, as in many other places, by a narrow slype; but, as we have already seen, the present church was extended southward even farther than was convenient for the earlier wall. There are three fine western arches. The middle one is the widest and was the entrance, but the others come down almost to the ground. There were three bays of oblong quadripartite vaulting, with interlacing arcades filling up most of the space below. At the base of these is a zigzag string-course, and a rubble wall which was probably panelled or plastered. The detail is wonder-

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[1] I had the advantage of examining the chamber in company with the late Mr. J. W. Clark, well known for his work *The Care of Books*. He was certainly of opinion that it was a library.

Fig. 1.   Entrance to chapter-house

Fig. 2.   Thirteenth-century fire-place

Fig. 2.   South end of dorter range

Fig. 1.   South-east doorway of chapter-house
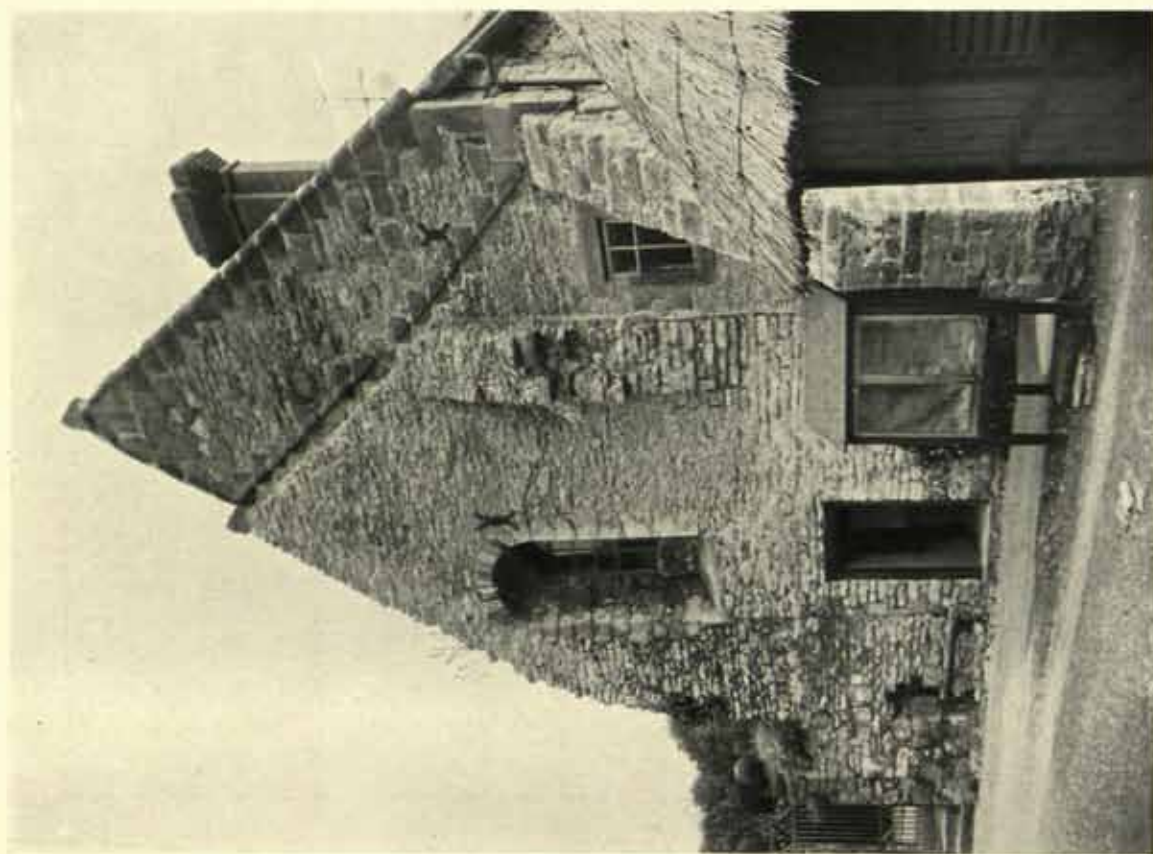
fully varied, the south side on the whole being decidedly richer than the north, though the north is more complete.[1] Holes under the arches appear to indicate the fixings of a series of statues. There were probably three single-light windows in the east wall, in a space of 13 ft., with flat buttresses below them.

In the south-east corner is a blocked doorway, which led to the buildings beyond. Its lintel is a large block with carvings of dragons and a grotesque head (pl. XXIX, 1). This does not fit well and is evidently an earlier stone used up. Some antiquaries would put it down to pre-Conquest times, but I confess that an early Norman date seems to me more likely. When was the doorway made? I know of no medieval example in such a position and one would naturally suppose that it was not inserted till after the Dissolution. A careful examination, however, shows pretty clearly that the doorway was planned from the start. Its jambs are of well-cut ashlar with the diagonal tool-marks so characteristic of the twelfth century. The column and base of the arcade east of the lintel are evidently made to fit it. On the west side there is no such correspondence, for the lintel projects farther than was quite convenient.

Section of
Norman base at "A" on Plan

Scale = 3 ins. to 1 foot

Fig. 2.

On 23rd January 1836, excavations in the chapter-house revealed four stone coffins, one apparently having been used for a child.

In the wall immediately south of the entrance to the chapter-house is a Norman respond-base (fig. 2) of earlier character than anything in the chapter-house itself. It appears to be *in situ*, but it is covered by the south wall and cannot have been used since the chapter-house was built. In it, therefore, we appear to have the only remains of the first Norman conventual buildings. It was part of the northern jamb of a doorway, but we cannot tell what building it led to. Possibly there was no chapter-house for the first half-century of the priory's history. A space may have been left for it, and the more necessary living rooms built farther south. We know nothing of the form of the Norman cloister, but the string-course of its roof is still shown north-west of the chapter-house and decidedly lower than the later roof (pls. XXIV, 2 and XXVIII, 1).

Nearly all the rest of this eastern range has perished, but there are some interesting remains at the south end. In the south-east corner is a low Norman

[1] There is a fine set of drawings of these details in Potter's book above mentioned.

fire-place with little columns, capitals, and bases (see pl. XXIX, 2). It was altered and discarded when the buildings south of it were erected in the thirteenth century, but its original character is still clear. It reminds us that the *calefactorium*, warming-house, or common-house, was generally in this eastern range, though often farther north than is indicated here. The fire-place in the east wall dates from the end of the fifteenth century, and we cannot now tell what the heating arrangements were before it was built and after the discarding of the old fire-place 200 years before. Possibly there was a brazier as at Durham, 'the house being to this end, to have a fyre keapt in yt all wynter, for the Monnckes to cume and warme them at'.[1]

The dorter extended over the whole of the eastern range, though the part over the chapter-house, communicating with the triforium of the transept, may have been used for other purposes.[2] One south window remains, which became a doorway when the buildings south of it were added, and is now a window again looking the opposite way (pl. XXIX, 2).

The roof-line of the western range is still clearly seen, continued west of the west wall to form a pentice. This pentice probably did not exist before the thirteenth-century block was built.

The Extra-Claustral Buildings.

It will be convenient now to deal with the buildings south-east of the eastern range, though part of those at the north-east are earlier in date.

The narrow range going east is not now roofed in, but has some out-buildings against its south wall. Inside these, but showing more clearly outside, on the south, are some small rough blocked arches, the top of which is only about 4 ft. from the ground. In the south wall also, near the east end, is a small blocked rectangular window, with a roll and fillet moulding of thirteenth-century character. One naturally tries to fit in these details to what might be expected in a rere-dorter so frequently found in this position. There are, however, none of the usual signs, and there are no traces of a great drain. The identification, too, is made unlikely, if not impossible, by the presence of a thirteenth-century fire-place on the upper floor near the east end. This has a thin rather deep lintel, resting on corbelled jambs (pl. XXVIII, 2): there is the usual projection on the opposite side of the wall. A fire-place in conventual buildings, if unconnected with the warming-house, the kitchen, the infirmary, or the guest-house, suggests an important private room, and I think that we have here part of the prior's

[1] *Rites of Durham*, p. 75.
[2] Under date 1524, the Register of Roland Bruge speaks of the common seal being affixed *in domo sive camera cartarum*. The muniment room was occasionally over the chapter-house.

Fig. 2. East side of farmery chapel

Fig. 1. East side of block south of dorter range
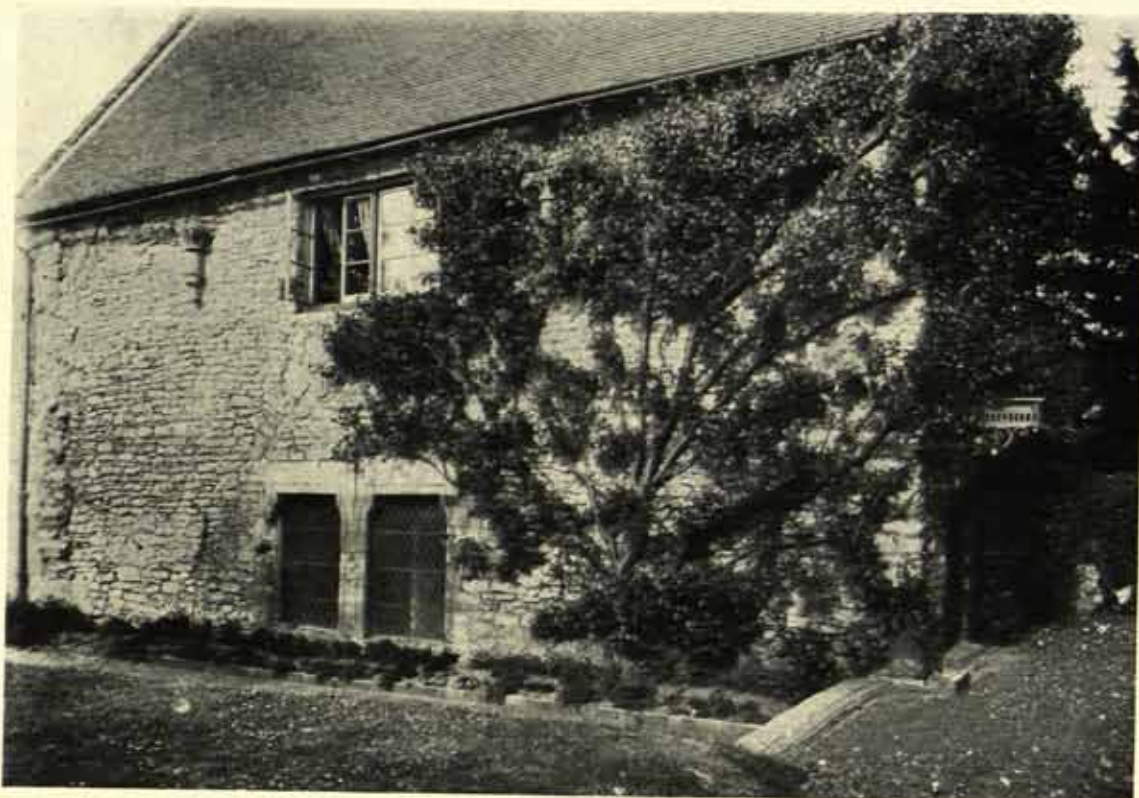
Fig. 1.   West side of block south of dorter range

Fig. 2.   Farmery and prior's lodge from south-west

lodging. A connecting arch was made when the range to the north-east was built and there is a later buttress on the south against the eastern part of the fire-place projection. The lower floor would probably be used for the necessary menial offices of the lodging. It had a doorway in the north wall, now blocked partly with a piece of fourteenth-century ball-flower ornament. There was another doorway on the upper floor to a northern extension which has now disappeared. Below this doorway are some corbels which show the line of the floor.

I fear that it would be pure guesswork to attempt to fix the position of the rere-dorter, especially as there is no great drain or stream anywhere near the dorter. It is conceivable that the western part of the block I have been discussing, the walls of which have been a good deal disturbed, formed the rere-dorter, and only the eastern part the prior's lodging. This, however, is very unlikely, for there is an important block to the south-west, of much the same date, to which the prior would need direct access.

This block must now be carefully examined. Its connexion with the south wall of the dorter-range has already been noted (pl. XXIX, 2). The northern extension, west of the dorter, is not original and may be modern. The Norman window of course became internal, and was no doubt used to connect the two parts. The door below is modern, but from remains of a western jamb on the south side I judge that a doorway was made from the start. The fire-place was discarded and became a doorway, now blocked, from which a staircase probably went eastwards to a floor which led to an east doorway to the new block (pl. XXX, 1). This upper doorway is of the shouldered form so common in the thirteenth century, with a plain roll moulding. On the ground floor are four broad rectangular single-lights, of which the two northern are clearly original. I do not remember to have seen such windows of the thirteenth century, but they are of a neutral form which might have been used at any time in an unimportant position. On the upper floor the windows are of two lights and much larger, though also square-headed. The scoinson arches are segmental-pointed, with roll-and-fillet moulding on the jambs. The windows have been shuttered and some of the ironwork and parts of low stone seats remain. There has been another upper doorway at the south end of the east wall, probably approached by a stair from a doorway under one of the modern windows. Later arrangements have removed the south jamb of this doorway, but the north jamb remains, as does the south jamb of the upper doorway. The landing was evidently covered by a pentice, as is still shown by a line on the south wall. There was one more outer doorway, in the south wall, with roll-and-fillet jamb and wooden lintel. The doorway west of it is modern.

All this description is necessarily minute and puzzling, and so far there has

been little indication of the use of this thirteenth-century block. The west side, however, is much clearer (pl. XXXI, 1). There are two fine pillar-corbels high up, with stiff-leaf foliage on the capitals. The corbels have evidently supported arcades going westwards, perhaps composed of wooden arches. The line of the steep-pitched roof of the north aisle can be seen against the wall. It is fairly evident then that we have here the beginning of a fine thirteenth-century aisled hall. It is decidedly broader than the frater, which was not aisled, but we do not know its length. What was its purpose? In many monasteries there is evidence, documentary or architectural or both, of a hall being built where meat could be eaten, the strict rule of abstinence from flesh-meat being observed in the frater. The usual name was the misericorde, but it was called the *deportum* at Canterbury and the 'lofte' at Durham. It was, however, a comparatively humble building, in size and style, and, in many cases, was connected with the infirmary range. There can be little if any doubt that this fine building at Wenlock was the prior's hall.[1] In every great monastery the more important of the guests were entertained by the head rather than by the whole convent. Henry III visited the priory several times. In 1236, 1237, and 1238 there are charges on the Pipe Roll for sending the king's wine to Wenlock. Before the first of these years, this fine hall may well have been finished. Its important end, with dais, would be the west and we cannot now tell its form. The other end had the usual screen doorways, which, in this case (see pl. XXXI, 1), have shouldered heads with roll moulding and a great relieving arch over. The ground floor beyond, whose external features we have already examined, would be the pantry and buttery. The kitchen and scullery were probably in the block to the north-east; we have seen that there are some signs of the ground floor there being used for menial purposes. It would obviously have been inconvenient to serve the prior's hall from the great kitchen west of the frater.

The upper floor, as we have already seen, had two doorways and two windows in the east wall and a window in the south wall. There was a rectangular window under the pentice of the dorter, which now has a modern look (pl. XXIX, 2). It is, however, original inside with a roll moulding on the jambs, and a wooden lintel, moulded in a similar way. The west window, on the upper floor, is of course modern (see pl. XXXI, 1). Inside, the character is remarkable. There is a broad containing arch with bold Early English jamb- and impost-mouldings, indicating pretty clearly a fine original fire-place, though the chimney has disappeared. Connected with the imposts are great wooden beams going through the thickness of the wall. The room may well have been the prior's own solar, or less probably an important guest-chamber. It is unlikely that

[1] It may well be the large hall referred to in Roland Bruge's Register under date 1521 : *magnamque aulam picturavit ac de novo certas ibidem fenestras vitriavit.*

there was a third floor till modern times, though there is an original shuttered lancet high up in the south wall. The roof has a plain strutted framework and I should not like to fix its date exactly.

I have dealt with this south-eastern portion of the conventual buildings at considerable length, partly because attention has never been called to it before, and partly because it still bears witness to the important character of the prior's lodge and guest-hall in the thirteenth century. Many of the points can only be appreciated on the spot.

At the north-east of the dorter range is a long building at right angles to it. It adjoins the chapter-house and is probably a few years later. We have seen that there is an original connecting doorway. There can be little doubt that this block was the *infirmaria* or farmery, which was not in a fixed position like the claustral buildings but was placed in the most private part of the monastery. It was frequently east of the dorter range. Often it had aisles, as at the Cluniac Priory of Lewes. At Castleacre and Wenlock, both of the same Order, there were no aisles. The chief doorway, disclosed in 1868, is in the eastern part of the south wall, and is a fine piece of late Norman work. It has a round arch, whose undercut dripstone is ornamented with hatched balls and ends in animal heads: a segmental arch partly fills up the tympanum. The capitals have volutes and incipient foliage with rosettes. The doorway was reached through the undercroft of the dorter, and by a cloister-walk or pentice, the string-course of whose roof is still very clear (pl. XXXI, 2). The buttresses on this side and the lower windows are all modern, but the upper windows are chiefly original with sills sloping steeply to throw the light into the hall below. At first the hall was of one storey only, but a second floor seems to have been added in the thirteenth century. The indications of this are found in the north wall, but they are so minute and confusing that I despair of making them comprehensible in a description. It is possible that the change was not made till the fourteenth century; there are windows in the building which may date from both periods. In one case a Norman jamb has been used to fit a later window. The exterior of the north wall is further confused by changes made after the Dissolution. In 1849 there was a square debased building here east of the chapter-house; east of it must have been an outside staircase leading to a rough doorway partly formed out of an original window. There was also a debased oblong building south of the chapter-house and west of the farmery.[1] It is probable that the partition wall 16 ft. west of the old east end was built in the thirteenth century: it has a locker on its west side with roll moulding. It goes through both floors and has a curious blocked doorway in the northern part of the upper wall. The southern chamfered jamb of this doorway was made for the

[1] See plan in Potter's book.

purpose, but the northern utilizes a jamb of an original Norman window. The doorway in the southern part of this wall is modern, but the square locker east of it may be old. The other partition wall 15 ft. east of the west end, also in two floors, was built in 1866. About the same time a late staircase against the west wall and the upper doorway it communicated with were removed. The roof in its present form was erected after the Dissolution, but some medieval beams appear to have been used up.

The ground floor of the hall contains some interesting features, including the restored effigy, possibly of a prior, which was found in the sacristy when it was excavated in 1865. The panelling 'came from the church at Bridgnorth, with the exception of the 3 beautiful panels at the East end', which were bought at Cheltenham by the late Mr. Gaskell.

We must now consider the great eastern block, parallel with the dorter range, and connecting the old farmery hall with the thirteenth-century block 90 ft. south of it. Few domestic buildings of the Middle Ages can rival it in dignity and charm. The great sloping roof, so expressive of shelter in a northern climate ; symmetrical corridors on the west side ; the varied east front—nearly all carried out at one period—form one of the finest late medieval ranges in England. The exact date is not known, but it is probably the last quarter of the fifteenth century. As in other buildings of the period the details are often lacking in refinement, but the general effect is extraordinarily fine (pls. XXX, 2, XXXI, 2, XXXII, 2). The chimney-stacks have been rebuilt and the black-and-white turret is post-Dissolution: its old flagstaff is preserved in the monastic library east of the cloister.

What is the purpose of the range? It has often been called the abbot's house,[1] but there was no abbot of Wenlock after the foundation of Earl Roger's Cluniac priory. It is not correct to speak of it as the prior's house ; for, as we shall see, it is partly an addition to the Norman infirmary, and partly an extension of the old prior's lodging and guest-chambers.

The Norman infirmary, so far as we can now tell, had no chapel. Its position would probably have been east of the hall, as at Canterbury, Ely, and many other monasteries. When the great eastern range was added this was the site chosen. Its connexion with the Norman block was through a little square-headed doorway to the south.[2] The chapel-character is clearly shown by the projecting eastern recess (pls. XXX, 2, XXXII, 1), by the altar which remains in it, and by

[1] See Turner and Parker's *Domestic Architecture in England*, iii, 366-71, where there are plans and a section.

[2] Potter's plan of 1849 shows this doorway in the middle of the wall, but this must be a mistake, as there is no sign of its having been moved, and there is the beginning of an arch, or hood-moulding, over the southern jamb on the west side.

Fig. 1. Interior of farmery chapel

Fig. 2. Farmery and prior's lodge from north-east

Fig. 2. Upper corridor of farmery and prior's lodge

Fig. 1. Interior of prior's hall

the piscina to the south. It is very rare to find a chapel on a lower floor, though there is one at the Cistercian abbey at Furness. Here the altar itself has no floor above it, but the western part is very domestic and actually has a fire-place in the north wall only a few feet from the altar. Such an arrangement is very rare if not unique. Apart from other evidence it seems to me to prove that this was a chapel for the sick and infirm and not merely for the prior. The fire-place has been a good deal restored, but enough is left to show that it is original. The two-light window on either side has been renewed.

The altar is a massive stone erection with seven cusped arches in front (pl. XXXII, 1). At either end is a recess, no doubt for relics as was commonly the case. On the northern part of the altar is now placed a fine lectern of Wenlock marble. The carving and material correspond with the cloister lavatory, and the date may be the same or a few years later. I do not know how long it has been in this position or where it stood originally.

The chapel was 19 ft. 6 in. from east to west, and there was no old wall for 32 ft. from north to south. I think, however, there must have been a screen or partition south of the altar-recess. In the southern part of the room is a *garde-robe* in the east wall, with a two-light window south of it. The doorway to the north is modern. There is an old locker in the south wall. The chapel is entered from the corridor by a doorway of late Perpendicular character: there is panelling on the soffit. The outer doorway opposite has a depressed head, south of which is a four-centred arch, now blocked but formerly open. The rest of the corridor has pairs of cusped rectangular lights, with panelled treatment between the main buttresses, leading to the upper corridor of similar character. The north window of the upper tier was blocked from the start on account of the pentice-roof. The corridors may or may not have been glazed originally. They are connected by a broad newel at the north end with four-centred entrance on both floors (see plans, pl. XXXIV). The doorway to the floor over the chapel has a broad double-ogee moulding. The room is now cut up by staircase and partitions, but there is no old wall across it any more than there is below. The north walls correspond closely, with the same broad lintelled fire-place. The upper north windows retain some of their old stonework with soffit-panelling. The single light above the chapel-recess appears to be modern, but the two-light window south of it with soffit-panelling is original. North of this latter, and a little below its sill, is a drain communicating with a gargoyle outside. The *garde-robe* south of the window is entered by a four-centred arch. There is a locker in the south wall, just east of the entrance. There has always been a third floor to this part of the building, reached by the newel, but with no doorway. The top room is lighted by two broad cusped windows in the north wall: the dormer in the east wall (shown in pl. XXX, 2) is not original.

Again we ask, what is the purpose of these rooms? In the twelfth century the beds of the sick and infirm were placed in the great hall—in the aisles when there were any—but in later medieval times infirmaries were cut up into smaller chambers. At Wenlock the two rooms were doubtless used for sleeping, and the large fire-place on the first floor would be as comfortable for those in bed, as the lower one in the chapel was for those attending the service.

Immediately south of the two chambers I have been discussing is a camera of two rooms, above and below, connected by a newel in the south-west corner. On the ground floor the entrance is from the corridor by a four-centred panelled doorway now blocked: the other entrances are modern. The two windows in each case are original, arched above and cusped rectangles below. There are fire-places in the south wall, the lower one having a bold corbelled straight arch.[1] There is a drain leading to a gargoyle in the east wall above, similar to that in the room to the east, but no *garde-robe*. There are several original lockers in the north wall, above and below, and one in the upper south wall. Opposite the last is a recess, which is now a locker, but has evidently been a hatch going through to the next room. There are also hatches in the west wall, the upper one having a curious shouldered arch.

These details may seem unimportant, but they form cumulative evidence as to the use of the camera. The identification has not been made before, but I am convinced that we have here the apartments of the Master of the Farmery. This man held an important position in a conventual house and would require suitable lodging. In the Customs of the Augustinian Priory of Barnwell, near Cambridge,[2] we are told that

> the Master of the Farmery . . . ought to be gentle, good tempered, kind, compassionate to the sick, and willing to gratify their needs with affectionate sympathy. It should rarely or never happen that he has not ginger, cinnamon, peony, and the like, ready in his cupboard, so as to be able to render prompt assistance to the sick if stricken by a sudden malady.

Again[3]:

> He should provide in a spirit of fraternal sympathy, a fire on the hearth, should the state of the weather require it, a candle, a cresset, and a lamp to burn all night; and everything that is necessary, useful, and proper.

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[1] The upper fire-place is modern, and it is not certain that there was one originally.

[2] Edited by J. W. Clark, 1897, p. 203.

[3] *Op. cit.*, p. 205. There is a similar passage in the *Customs of Cluny, pars prima*, cap. xxiii, *Vetus Disciplina Monastica*, ed. Herrgott, 1726, p. 184: *habet namque armariolum in quo talia recondit, et adhuc candelas, ceteraque necessaria, raroque aut nunquam defuerit in eo piper, cuminum, gingibrum, aliaeque radices quae sunt salubres ut sit semper in promptu quod valeat infirmo fortassis ut aliquando contigit subitanea passione percusso vel si expedit ut pigmentum ei conficiatur.*

To fulfil these various duties, the arrangements at Wenlock are very convenient—the cupboards, the hatches, the easy access to the quarters of the sick and to other parts of the monastery. It will be noticed that the blocked arch I have referred to in the lower corridor is almost opposite the entrance to the Master's camera. It might be a convenient way of communicating with those members of the community who were not admitted into the corridor. The only entrance to the upper room, except from the newel, is in the north wall. The doorway has no proof of being original, but I think there must always have been a door in that wall, there being no entrance from the corridor.

We now come to the finest camera of all, adjoining that of the Master of the Farmery. It consists of a room on each of three floors, connected by a newel.[1]

The ground-floor room is the modern kitchen and its original form is therefore masked. It is entered from the corridor by a four-centred doorway. There are two pairs of two-light windows—rectangular cusped lights—with a buttress in the middle of each pair (pl. XXXII, 2). The massive roof-beams may be original. The passage at the north-east is probably modern, and the outer doorway has, at some time, been brought from a thirteenth-century building. It is square-headed with roll moulding. The fact that its southern jamb is immediately under a gargoyle is sufficient evidence that it formed no part of the late fifteenth-century arrangement.

The upper room is one of the finest that have come down to us from the period. The details [2] are somewhat coarse, but the height and general effect are very impressive. The roof is of the collar type with curved braces. There are two purlins on each side with wavy cusped purlin-braces. Each set of rafters is curved in addition to the collar-braces, which rest on wooden posts supported by stone corbels. South of them, on the west side, and not connected with the roof is a long corbel, with grotesque support, about 7 ft. from the floor. The four windows, in pairs like those below, are arched, with panelling on the soffit (pls. XXXII, 2, XXXIII, 1). Each has two little 'pillars' at its sides. Their tops are 3ft. 1 in. from the floor, and they are therefore too high for seats. They may be described as small tables, but they are very unusual in form.[3] The entrance, two

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[1] I confess that I thought at first that this newel was separate from that of the Master of the Farmery, but measurements show clearly that they are the same, the staircases being above and below each other. The arrangement is very rare in England. Mr. Hamilton Thompson tells me there is an example in the tower of Tamworth church.

[2] There are many careful drawings in Potter's book.

[3] Both Potter's and Parker's books show them as coming down to the floor. They are now two or three inches from it, and it is difficult to see how they can ever have rested upon it.

steps above the corridor, is at the north-west: it has a four-centred arch with rather coarse mouldings. The doorway to the newel is also four-centred (pl. XXXIII, 1). The fire-place was altered after the Dissolution and has a fine mantelpiece: the inscription was added by the late Mr. Gaskell.

The top room, approached by the newel, is over the camera of the Master of the Farmery. The dormer in the east wall is not original, but the light below it is, with old jambs (pl. XXXII, 2). In the south wall is an old locker, west of which are three corbels which must have been brought from a thirteenth-century building.

There can surely be no doubt that this set of three rooms formed the prior's camera. The lowest would be the place of business, the highest the bedroom, from the staircase to which a commanding view is obtained of the hall. This main room, though a fine one, is of course much smaller than the aisled hall south-west of the dorter-range, but the latter would still be used for large numbers, the more personal guests of the prior being entertained in his new hall.

One point of interest should be noted. There is a drain in the hall, north of the windows, leading to a gargoyle (pls. XXXII, 2, XXXIII, 1), but no *garde-robe*. Did therefore the prior have the use of the chamber to the south, where there is a *garde-robe* as well as a drain and gargoyle in the east wall? I hardly think so, for the connexion between the two rooms is modern. The drawing-room, as it now is, was approached only from the corridor,[1] and it would therefore have been a convenient separate chamber for an important guest. It has a broad fire-place in the south wall, with panelling at the sides. There are two windows in the east wall, and one on either side of the fire-place. The former have panelling on the soffits, but not the latter: all have the little pillar-tables in the jambs. There are two large rectangular lockers in the north wall. The roof is of the trussed-rafter form with seven cants. In 1859 there was an upper floor reached by a wooden staircase at the north-east. I do not think that this upper floor can have been intended, though there are two single-light windows high up in the south wall.

There is no newel to the room below, which was probably also a guest-chamber. It is now divided up for domestic purposes, but the original arrangements are clear enough. The position of fire-place,[2] doorway, and windows is the same: the south windows[3] have pillar-tables but not the east. The *garde-*

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[1] The four-centred doorway, two steps above the corridor, is moulded with a broad double ogee. South of it is a blocked arch I cannot explain. There is a round scoinson on the east side, splaying towards a narrower opening which is interrupted by the wall-plate of the corridor roof: apparently there have been stanchions across.

[2] This now has an eighteenth-century mantelpiece.

[3] The eastern one is blocked.

robe turret is continued to the ground and has a projection at the south (pl. XXXII, 2).

The lower corridor is continued some distance south of this chamber to form the east end of the older thirteenth-century range. The little blocked window,

Fig. 3. Gate tower.

though Perpendicular, has an Early English roll moulding for its inner north jamb. There are two slit-windows near the ground. The doorway, now blocked, is entirely Perpendicular. The arch opposite, now enclosing the 'back door', is a Perpendicular inner doorway leading from the corridor to the earlier range.

The upper corridor is not now continued so far south : its south end, as we have already seen, has an arch to connect the corridor with the older range. This

corridor is a charming feature (pl. XXXIII, 2). Its inner roof is gabled, the western half being really a continuation of the roof of the chamber to the east.

The buildings we have so far considered are closely connected, whether round the cloister or beyond. Few outbuildings are left. One of the gate towers remains about 80 yards south-west of the church. It is a very plain structure of the thirteenth century, and has had an eastward extension with steep-pitched roof (fig. 3). Low down at the south-west corner is the beginning of an arch, which may have led to another tower. The *Archaeological Journal* of 1846 speaks of one of the 'fortified gates' falling shortly before.[1] Less than a hundred yards to the north-west is the 'old gaol', an early stone and half-timbered house east of Shineton Street. In its east wall are two arches which must date from the end of the twelfth or the beginning of the thirteenth century. They look like screen doorways at the end of a hall, but whether the hall had any connexion or not with the priory we cannot now tell.

The cemetery was probably, as usual, south of the church and east of the chapter-house. There is no slype connecting it with the cloister.

About 60 yards east of the farmery is a pond which is presumably the medieval fish-pond. There is a long raised causeway on the south side. There is an old well south of the present back drive and about 200 yards from the west front of the church.

LATER HISTORY.

The Dissolution took place on 26th January 1539-40, the net income being £401 7s. 0½d.: two years later it was about £50 more. In 1276 there were forty monks and three lay-brethren; in 1278 there were thirty-five monks.[2] At the Dissolution there were only thirteen. The last prior, John Bayly, Baylis, or Cressage, retired to the manor house of Madeley, an old possession of the priory, and died there on Christmas Day, 1553. In the Inventory of Church Goods under Edward VI we find that the prior had given to the parish a 'cope of red and blew tafate imbroderyd w' gold & sylu'' on condition that part of the parish 'shuld at his decess mete his bodie at Byldwas bryge and to bryng hym to Wenloke church to be buried'.[3] The cope was presumably accepted on this condition, but the prior was buried at Madeley on the day following his death.

The prior's pension amounted to £80, and that of the other monks to £6 13s. 4d., £6, or £5 6s. 8d. Various sums were also paid to other depen-

[1] *Archaeological Journal*, ii, 87.

[2] Sir G. F. Duckett, *Visitations of English Cluniac Foundations*, pp. 18, 28.

[3] The Inventory was extracted from the original returns preserved in the Public Record Office by Miss H. M. Auden, and is printed in the *Transactions of the Shropshire Archaeological and Natural History Society*, Second Series, xii, 92-3.

dents of the priory.[1] Particulars of different members of the community are given in a remarkable diary or register of Thomas Butler, who became vicar of Much Wenlock in 1524. The register began on 26th November 1538, and ended on 20th September 1562. Its evidence is priceless as to the state of the Church of England in a small town during the latter part of the reign of Henry VIII, the whole of those of Edward VI. and Mary, and the first four years of Elizabeth. I am concerned here only with the light it throws on the priory and its inhabitants. Extracts were made in 1840 for private reference by the Rev. C. H. Hartshorne, and are printed in the *Cambrian Journal* for 1861. Another set of extracts was made by Mr. James Bowen of Shrewsbury and is preserved among the Gough MSS. in the Bodleian Library. I quote from both sets, as printed in vol. vi (1883) of the *Transactions of the Shropshire Archaeological and Natural History Society.* Unfortunately the register itself seems to have been destroyed in the fire at Wynnstay in 1859.

> Rauf Patteson Brewer in the Monastery of St Milb'ge.
> The backhouse and brewhouse of the Priory sometime called St Milburge house.
> (1542) John Morgan sometime Organ player of the Monasterie of St Milburge ... an experte and full conyng man in Musicke and did set many a swete and sole'ne song to the lawde of Almyghty God whoo take his sowle to his m'cy. Amen.
> (1543) Sr Rychard Fysshwyke p'ist sometyme Monck and Sexton for the space of thretty Er and above in the Monast'ie of St Milb'ge.
> (1549) Thos. Smyth sometime Monk in the Monast'e of St Milburge and at his *dep'ting* Subp'or of the same and of the age of 115 (as I Sr T. Botelar) heard him say.
> (1551) Sr Thos Acton . . . sometime monk & Celerer.
> (1559) Rauf Lee Gent. . . . who in his lifetime was kerver at table of the worshipful father in Christe Dop'ne Ric' Syng od'wise Ricd Wenlock P'or of the Monastery of St Milburge here.
> (1560) John Bysshop who somtyme was in the office of the Cham'layr wthin the Monast'ie of St Milburghe here.
> (1538) Thomas Fenym' Porter of the Monastery.

My last quotation reveals a wonderful character and indicates a high level of craftsmanship in the priory.[2]

> (1546) Sir Wm Corvehill, whoo was excellently & singularly experte in dyv̄se of the vij liberal sciences & especially in geometre, not greatly by speculacon, but by experience ; and few or non of handye crafte but that he had a very gud insight in them, as the making of Organs, of a clocke and chimes, an in Kerving, in Masonrie,

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[1] *Letters and State Papers of Henry VIII*, vol. xv, no. 111: cf. Rymer, *Foedera*, vol. xiv, p. 659.
[2] For the full extract and the light it throws on the parish church, see the author's *Churches of Shropshire*, 218-20.

and weving of Silke, an in peynting ; and noe instrumente of musike beyng but that he coulde mende it, and many gud ghifts the man had, and a very pacient man, and full honeste in his conversacon and lyvng ; borne here in this borowe of Moche Wenlok & somtyme moncke in the monastrie of St Mylbg̃e here . . . All this contrey hath a great losse of the death of the sd Sir Willm Corvehill for he was a gud Bell fownder & a makr of the frame for bells.

At the Dissolution there were various proposals for utilizing the buildings and revenues of Wenlock for a new diocese. According to one, the new see of Chester was to be combined with Wenlock, but the most important is headed 'Shrewsbury cum Wenlock' in Misc. Book, *Court of Augmentations*, xxiv, fo. 26. An elaborate constitution is provided,[1] but the scheme came to nothing, and most of the buildings were destroyed. There were no parochial rights, as at Shrewsbury, so that even the nave was not preserved.

According to the Patent Roll of 37 Henry VIII, the priory was granted to *dilecto servienti et medico nostro Augustino de Augustinis in medicinis doctori . . . exceptis tamen semper pro nobis heredibus et successoribus nostris omnino reservatis omnibus campanis ac toto plumbo vitro veteri ferro ac omnibus lapidibus et edificiis nuper prioratus assignatis preterea ea que firmario ibidem tempore dissolucionis eiusdem nuper prioratus assignata et appunctuata fuerunt.* There is unfortunately no schedule of the buildings as in so many other cases.

The physician soon sold the property to Thomas Lawley. In Thomas Butler's register, under date 1556, the christening is recorded of ' Richd the son of Thomas Lawley Gent. and of Beatrix his wife, dwelling within the sight of the Monasterie of St Mylburge the Virgin '.

According to Mr. Walcott,[2] the property passed after a time to Robert Bertie, who sold it to Viscount Gage, from whom it passed to Sir William Wynn. So far as I am aware, the post-Dissolution history of the estate has not been carefully worked out. Mr. James Milnes Gaskell became the owner soon after the middle of the last century. He was M.P. for Wenlock from 1832 to 1868. On his death in 1873 the priory passed to his elder son, the Right Hon. Charles George Milnes Gaskell, M.P. for the Morley Division of Yorkshire from 1885 to 1892. Mr. Gaskell died in 1919, and the property now belongs to his widow, the Lady Catherine Milnes Gaskell, daughter of the fifth earl of Portsmouth.

The priory, as in other cases, passed through centuries of neglect. The ruins were a convenient quarry for the neighbourhood. Mayor's drawing, made late in the eighteenth century, shows stone being carted away. The *Archaeological Journal* of 1845 speaks of the farm-servants tearing asunder the clustered

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[1] It is transcribed in M. E. C. Walcott's *Four Minsters round the Wrekin*, pp. 94, 95.
[2] *Op. cit.*, p. 90.

piers for mere amusement. The occupied part ceased to be a mere farm-house in 1858 and was occupied for a short time by Sir Charles Rouse-Boughton, eleventh baronet, who built the main stack of chimneys. The house was completely occupied by the Gaskells in 1862, and, with the ruins and grounds, has been well cared for ever since.

It only remains for me to offer my thanks to several friends who have given their assistance. In the first place I must mention the late Mr. Gaskell, who not only enabled me to carry out the excavations of 1901, but repeatedly invited me to write a full account of the priory. Lady Catherine Gaskell has granted me every possible facility for examining the buildings, and has placed at my disposal the note-book which Mr. Gaskell had kept for many years: I have quoted from it several times in the course of the paper. Prebendary Clark-Maxwell has talked over with me the problems the buildings suggest. To Miss Rose Graham I owe a great debt; she has made many extracts for me from the Cluniac Customs, and from other documents, mainly of the Dissolution period. Other acknowledgements have been made above. Most of the photographs are by Mr. Martin Harding, nearly all being specially taken in June 1921. Pls. XXV, 1, 2, XXVII, 1, 2, XXIX, 1 are from photographs by Mr. H. W. Hughes, Mayor of Dudley. Pl. XXVIII, 1 is by Mr. J. Eyre Poppleton. The general plan has been measured and drawn by Mr. Philip W. Hubbard. Careful comparison has been made with the plan of Mr. T. L. Worthington, published in *The Builder* of 23rd May 1885. Since that time some of the fragments of walling shown on his plan have been more or less obliterated by the effects of time, but most of them are shown on the new plan. I do not feel at all sure of the original form of the north side of the presbytery. In many cases the exact shape and position of the columns cannot be decided without excavation. On the scale adopted small details cannot be shown, but they are generally to be found in Potter's book. Apart from partitions there are very few modern alterations and they are not shown on the plan. The plan of the excavations of 1901 was measured and drawn at the time by myself and has been prepared for reproduction by Mr. Hubbard.

The priory is one of the finest that have come down to us from the Middle Ages and contains several features of unique interest. There are few places indeed where the majesty and charm of a great religious house are more easy to realize than at the monastery of St. Milburge at Much Wenlock.

DISCUSSION.

Prebendary CLARK-MAXWELL had been at Wenlock on the day the foundations were discovered, and thought they were certainly those of the early building, but there were hardly any architectural indications of date. They occurred in the middle of a church which was not later than the thirteenth century, and it would be difficult to prove they were not those of St. Milburge. It had been stated that Dudley and Paisley were daughter houses of Wenlock, and he thought that Paisley had been colonized from Dudley. The large recess with three arches could belong to nothing but a library, with a large space for books; and, on that theory, the enclosed space at the west end of the south aisle must have been for another purpose, for it was incredible that two libraries would have been required in one century. Perhaps the latter had served as offices, such as the cellarer's checker. The tables beside the window of the Prior's camera were too high for seats, and perhaps by the end of the fifteenth century window-seats had passed out of use and survived only as ornaments.

The DIRECTOR said that at first sight the Wenlock ruins looked simple and ordinary enough, but certain differences in detail emerged, which gave the paper its chief interest. The curious chamber on the west side of the south transept ranged with the west wall of the chapter-house, which was earlier than the transept. In a normal plan the line of the west wall of the chapter-house would be that of the west wall of the transept. When the eleventh-century church was superseded by the thirteenth-century building, the transept was shifted east, but the chapter-house was not rebuilt, and a building was added to make up the line. An exact parallel could be adduced from Peterborough. When the abbey church was rebuilt after the fire of 1118 the Saxon church was standing, and the east wall of the cloister, having been aligned with the west wall of the Saxon south transept, was not altered, although the new transept was set farther to the east. In the space between its west wall and the east wall of the cloister there was set a building called 'le bay', which was used, it seemed, as a vestry.

Mr. CLAPHAM thought it should not be assumed without argument that the foundations under the presbytery were those of the Norman building. If Leofric had built a church of any importance, the foundations might mark its east end, not that of the Norman church. In view of the Confessor's work at Westminster and Harold's quire at Waltham, there was no reason why the foundations should not date from 1050. The main apse had no buttresses, but only a set-off.

The PRESIDENT remarked on the difficulty of following intricate plans for any one not familiar with the site; and those within reach would be prompted by the paper to visit the ruins themselves. The thanks of the Society were due to Dr. Cranage for his admirable account.

N

Priory Church

Lady Chapel

Sacristy

Cloister Garth

Chapter House

Lavatory

Farmery Hall

Farmery Chapel

South-East Range

Frater

Dorter Range

First Floor Plan

Plan of Room above S. Aisle of Nave

Note Triforium floor is 8 ft above floor of Room.

Scale of Feet

Existing.   Destroyed.

12ᵗʰ Century
13ᵗʰ ,,
14ᵗʰ ,,
15ᵗʰ ,,(late)
Modern
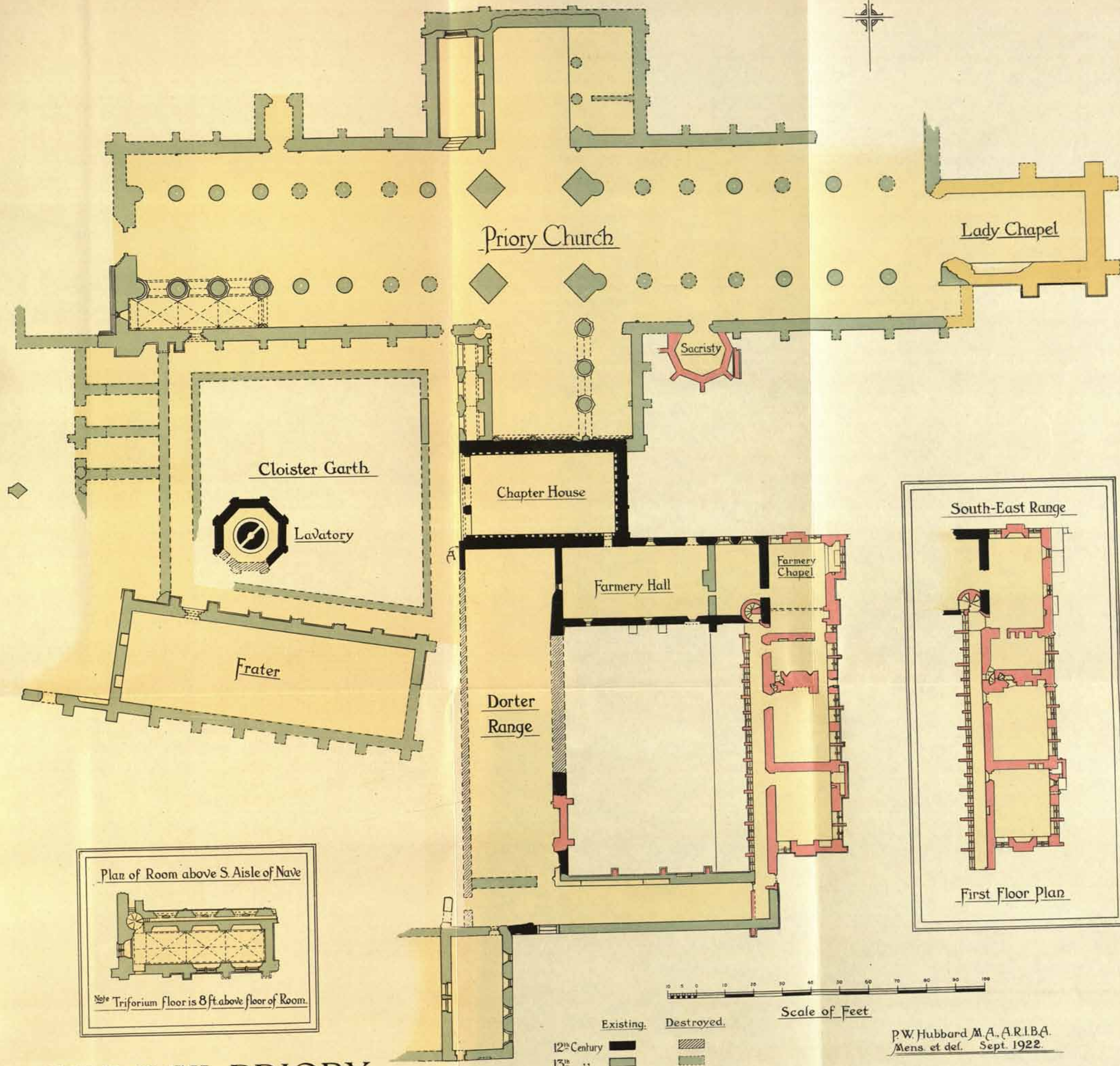
P.W. Hubbard M.A., A.R.I.B.A.
Mens. et del. Sept. 1922.

WENLOCK PRIORY

VIII.—*On Two Medieval Bronze Bowls in the British Museum.* By
O. M. DALTON, *Esq., M.A., F.S.A.*

Read 19th January 1922.

BRONZE bowls engraved [1] in the interior with figure subjects during the
Romanesque period are relatively numerous. But those with associated scenes
or consecutive stories are few, and it is to this class that the two examples
described in this paper belong, one having scenes derived from a Christian
legend, the other subjects from classical mythology. The first, found in London,
was formerly in the collection of Mr. W. Ransom of Hitchin; [2] the second,
brought up from the bed of the Severn very nearly a century ago, was presented
by Sir James Agg Gardner, M.P., in 1920. We may begin with the example
containing the Christian legend, the story of St. Thomas the Apostle.

I.

The St. Thomas bowl.

The bowl (fig. 1) is large and deep,[3] of quite a different form from the
shallow and smaller type represented by the second example, which in shape
approximates to that of the well-known gemellions made at Limoges.

Three other bronze bowls engraved with the legend of St. Thomas are
known, two found together in the course of the nineteenth century at Bethlehem,[4]

[1] The process by which the decoration was produced is generally considered to be engraving or
punching by means of metal tools, and in what follows all bowls of the class will, for convenience, be
described as engraved. But it will be seen that a recent theory supposes the lines not to have been
incised but bitten by acid (p. 158). The theory is, however, strenuously contested, and this affords an
additional reason for retaining the usual adjective.

[2] It was presented to the Museum by Mr. F. Ransom in 1915. It has been considerably
damaged, and is in places restored near the edge ; but though parts of the inscription have been lost,
the figure subjects remain intact. It is believed to have been found in the Thames.

[3] Diameter 13 in. : depth, 3½ in.

[4] Discovered with a number of other medieval objects (a crozier, candlesticks, etc.) in a basement
under the medieval part of the monastery near the Church of the Nativity, now occupied by the
Franciscans. For information with regard to this find, made in the second half of the nineteenth
century, I am indebted to that well-known archeologist the R. P. Vincent, of the École Biblique de
St.-Étienne, Jerusalem. For further information, and for excellent photographs of the Bethlehem
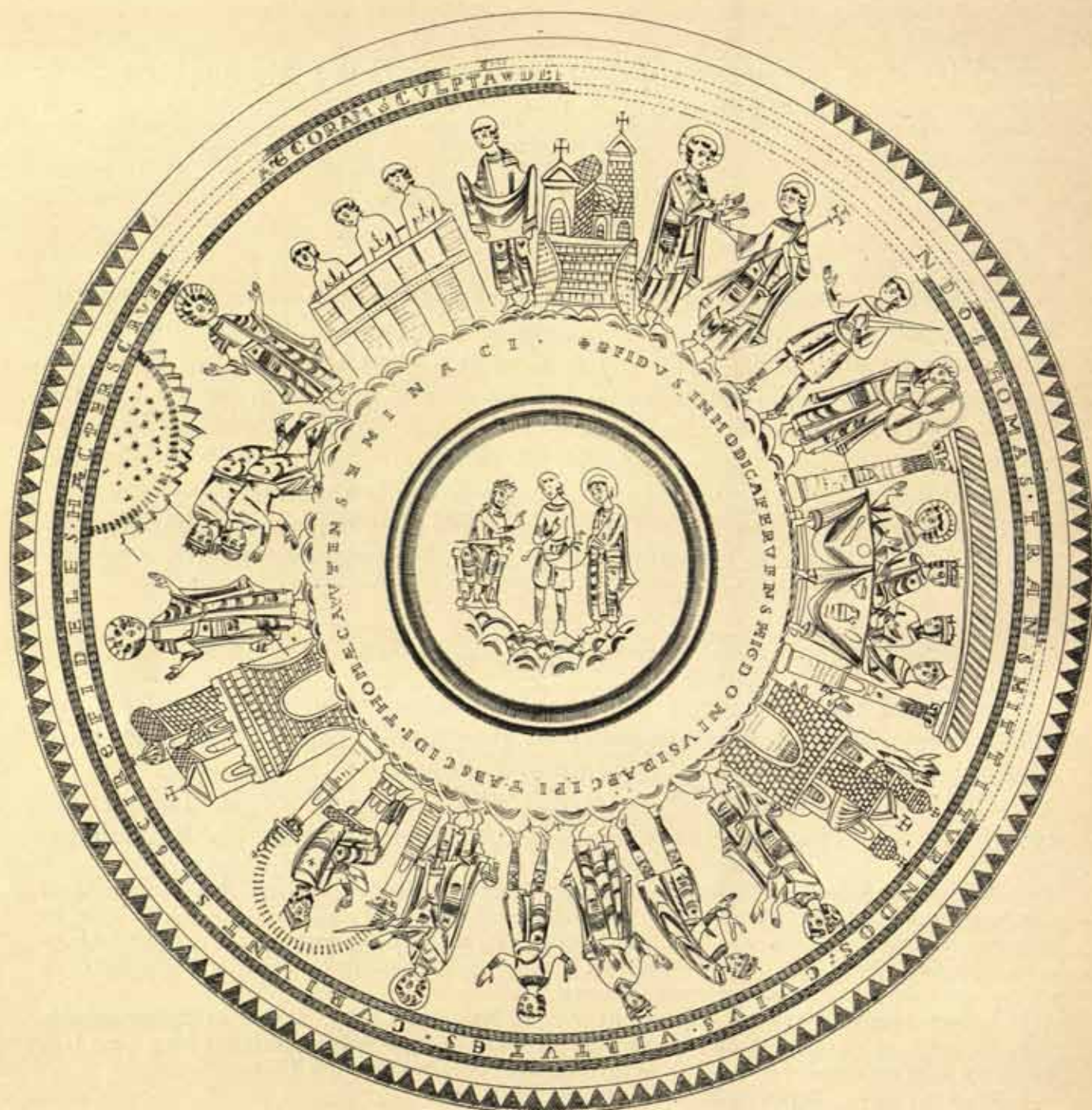
Fig. 1. The St. Thomas Bowl.
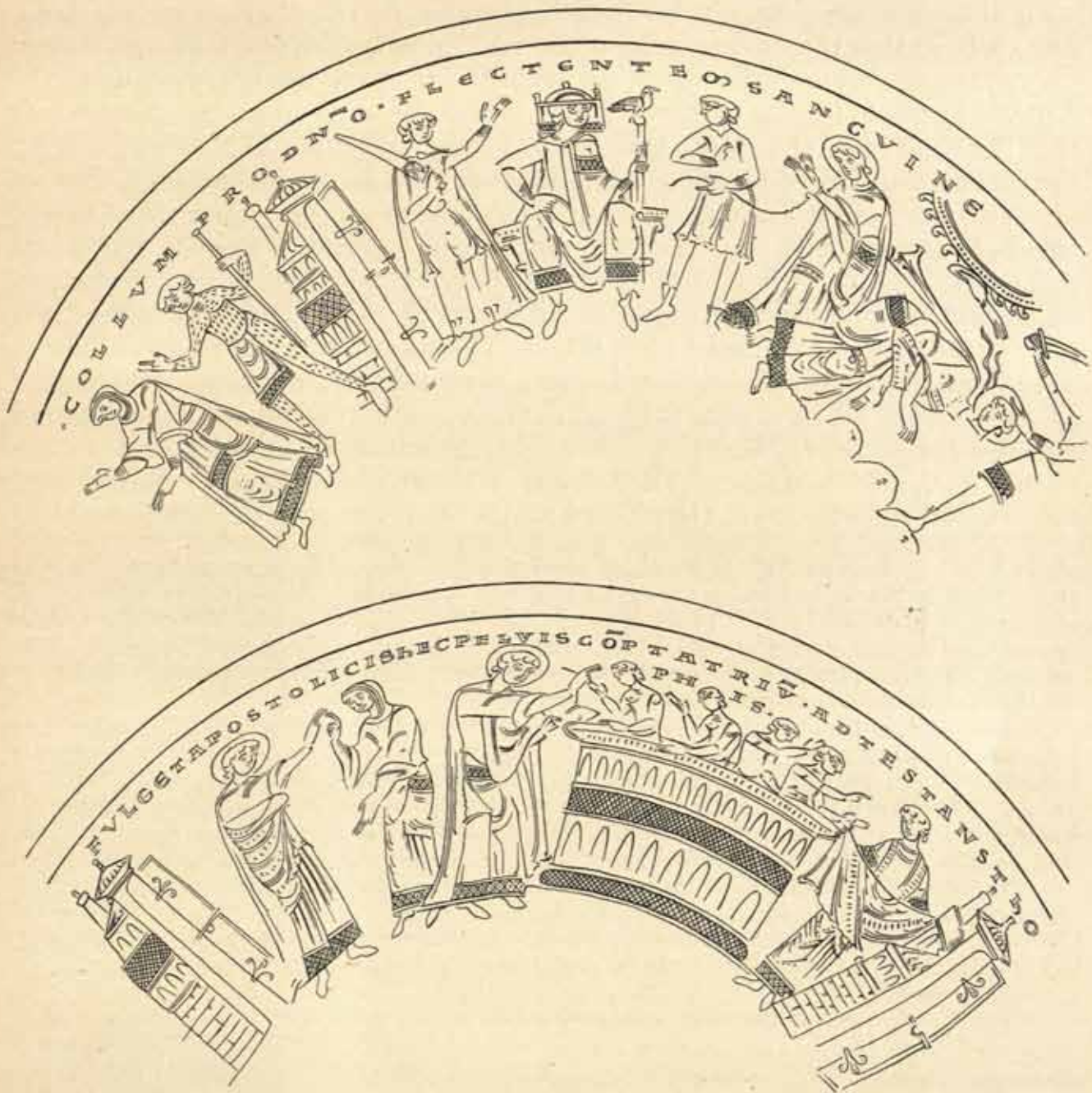
Fig. 2. Scenes from the St. Thomas Bowl in the Louvre, Paris.

one acquired in recent times by the Louvre. Two selections of subjects from the Legend are represented by these four bowls. The two Bethlehem bowls each illustrate one of these; the British Museum and Louvre examples again one each, so that the selection upon our specimen corresponds, though not in every minute detail, to that upon one Bethlehem bowl, the selection upon the Louvre example to that on the other.[1] It will be seen from the illustrations that the style of all the Bethlehem bowls is easy and graceful, the lines having the certainty and freedom which mark the work of an accomplished draughtsman.

The story of St. Thomas, as represented by the scenes upon these bowls, agrees in general with the version in the Golden Legend,[2] but since the bowls themselves are of earlier date than the Legend, the sources are necessarily older, and are probably the same in substance as those upon which the compiler of the Legend himself had to draw. The most important of these sources were the *Liber de Miraculis Beati Thomae*, attributed either to Gregory of Tours, or some one of his time, that is to say to the second half of the sixth century, and the later *Passio Sancti Thomae*, which incorporates many additions and embellishments due to medieval fancy. The *Liber de Miraculis* is the oldest Western source; the original sources are in Greek and Syriac, and date from the fourth century.[3]

bowls, I have to thank the R. P. Orfali, of the Bethlehem monastery, who was so good as to bring the photographs personally to London during a recent visit to England. The Bethlehem bowls (cf. pl. xxxv) will be published by M. Camille Enlart in one of the volumes of his *Manuel d'archéologie française*, and perhaps in his *L'Art des Croisés*: they were described by him at a meeting of the *Société nationale des Antiquaires français* on 15th November 1922. They will be permanently exhibited in the Museum now being organized by the Franciscans.

[1] The bowl at the Louvre is of the larger type, in this corresponding to our example. The style is also closely similar. But differences in the method of execution suggest that it is not by the same hand; the lines are often slightly zigzagged or waved, while those on our bowl are not so treated. The subjects in the Louvre bowl are partly reproduced in fig. 2, and are from photographs kindly sent by our Honorary Fellow M. J. J. Marquet de Vasselot, who described the bowl in the *Bulletin de la Société des Antiquaires de France*, 1906, pp. 394-400, though without illustration.

[2] The story as represented at a later time during the Gothic period, in sculpture, on stained glass and elsewhere, is probably based on the Golden Legend. In glass it occurs in the choir windows of Chartres, Bourges, and Tours; in sculpture, it is best seen on the tympanum of the north portal at Semur (E. Mâle, *L'Art religieux du XIIIᵉ siècle en France*, pp. 354-5, and at Poitiers (Mâle, *L'Art rel. du XIIᵉ siècle*, p. 301).

[3] The Greek version was first completely published by M. Bonnet (*Supplementum Codicis Apocryphi* I: *Acta Thomae*, Leipzig, 1903), and has been translated by E. Hennecke, *Neutestamentliche Apokryphen*, 1904, pp. 480 ff. The Syrian version is perhaps earlier and was certainly not written after the fourth century (W. Wright, *Apocryphal Acts*, 1871; F. C. Burkitt, *Journ. Theological Studies*, p. 280). Some have held that the 'Acts' of this apostle were first composed towards the middle of the third century in Edessa, in which city the body of St. Thomas is said to have been finally buried; in any case the *Acta* are strongly influenced by Syrian Gnostic ideas. Before the collection and publication of these Acts, which recount the apostle's journey to India and martyrdom there, earlier unwritten tradition, current in the time of Origen, made Thomas preach in Parthia, and die a natural death in Edessa. The *Liber de Miraculis Beati Thomae Apostoli*, mentioned above as the oldest Latin source, is published

After this brief mention of the sources, we may turn at once to the inscriptions and the series of episodes engraved in the interior of the bowl.

Round the upper part, under the rim, are three hexameters, forming a continuous line, but here printed one under the other in order that they may be recognized as verses :

[AD CONVERTE]NDOŚ THOMAS TRANSMITTITVR INDOS
CVIVS VIRTVTES CVPIVNT SI SCIRE FIDELES
HAEC PERSCRVTEN[TVR QV]AE CORAM SCVLPTA VIDE[NTVR]

Round the central medallion are two more hexameters :

PFIDVS INMODICA FERVENS MIGDONIVS IRA
PCIPIT ABSCIDI THOMAE CAPVT ENSE MINACI.[1]

These verses recur on the bowl with a corresponding series of subjects at Bethlehem. The name Migdonius is a mistake for Misdaeus (Mazdai) of the legend, and seems due to a confusion on the part of the person who provided the craftsman with his copy. He transfers to the king in a masculine form the name of a lady, Mygdonia, who plays a part in the story (see below, p. 139).

The following is a detailed description of the scenes in their order.

The first shows our Lord carrying a long cross, taking St. Thomas by the hand in order to deliver him to Abbān, an envoy sent by Gondofar (Gondopharnes), who required a skilled constructor to build him a palace. The buildings

by Bonnet in the same volume as the Greek *Acta*, as also is the later *Passio Sancti Thomae Apostoli*, described by Bonnet, as *opusculum mixtum ex actorum quibusdam fragmentis aliisque narratiunculis et commentatiunculis satis ineptis*. The version in the Golden Legend derives many episodes from the *Passio*. Internal evidence assigns the *Acta* of St. Thomas to the School of Bardesanes. In spite of extensive Catholic revision, they form one of the most interesting monuments of Syriac Gnosticism. The Parthian and Indian missions of St. Thomas rest upon less sure foundations than his connexion with Edessa (cf. F. C. Burkitt, as above, i, 280, ii, 94, and his article in the *Encyclopaedia Britannica*). But the visit of the apostle to Parthia and India is possible. Gondopharnes, the first of the 'Indian kings' to whom he is said to have come, is an historical ruler who represented the Parthian power in Seistan and Kandahar, the Kabul Valley and North Western India ; his reign began in A.D. 19, and had not ended in A.D. 45. The identity of 'Misdaeus' (Mazdai), the second king visited, under whom St. Thomas suffered martyrdom, is less certain ; he may possibly have been Abdagases, viceroy of Gondopharnes in Seistan. See E. J. Rapson, *The Cambridge History of India*, vol. i, 1922, pp. 576-80.

[1] The legends on the bowl in the Louvre, and on the Bethlehem example with the same subjects are as follows. Round the upper part :

Fulget apostolicis hec pelvis compta triumphis
Adtestans Thomam fidei meruisse coronam
Collum pro Domino flectentem sanguine fuso.

Round the central medallion, which represents the saint's entombment :

Cum fletu plebis doctore carer(e) dolentis
Corpus apostolicum ducitur ad tumulum.

In the above the abbreviations have been supplied and irregularities corrected.

are supposed to represent Caesarea, according to the legend the scene of the action. Abbān, described in the early Greek version as a merchant acting as the messenger of his royal master, is here, in accordance with medieval notions of an envoy, given spurs and a sword. Next in order we see the wedding feast of the king's daughter at Andrapolis, a city at which St. Thomas and Abbān arrive upon their journey; this scene closely follows the fourth-century story, the only variation being that the girl standing on the left is playing a stringed instrument instead of a flute. The king is seated at table with St. Thomas on his right, his daughter and the bridegroom on his left. On the extreme right, just beyond the column, is the head of a dog, holding in the jaws a human hand. The legend tells that St. Thomas and Abbān, upon entering the city, were at once invited to the feast. At table the saint sits with downcast eyes, refusing to eat or drink. The musician, a Jewish girl, recognizes him as her compatriot and sings in Hebrew, but the king's butler is so incensed by this abstinence that he strikes the offending guest in the face. St. Thomas is indignant, and says to him : ' My God may forgive thee this deed in the next world, but in this world he will show a sign, and forthwith I shall see the hand that smote me carried in the mouth of a dog.'[1] Shortly afterwards the butler, going out to draw water, is fallen upon by a lion, and a black dog brings his right hand to the royal table. This was a popular scene in the later Middle Ages. In representations of the Gothic period we see the Jewish flute-player standing on her head in front of the table to divert the guests, as dancers are often represented, the dog appearing a little beyond her. The episode is derived from the early legend, and aroused the ire of St. Augustine,[2] who criticized the stories of St. Thomas for their unchristian and non-moral episodes.

The story goes on to say that the Jewish girl having explained how the saint had foretold this disaster in the Hebrew language, the king regards his guest with veneration, and asks his blessing on the bride and bridegroom. It is accorded, and the bridegroom, conducting the saint to the door, finds a palm-branch with dates upon it in his hand;[3] in the night Christ appears in a vision to the newly married, and enjoins on them continence, and the abandonment of worldly things. According to the later versions of the story the bridegroom, under the name of Dionysius, became a bishop, the bride, as Pelagia, a nun and martyr. On the bowl we see the saint before a church blessing the newly-

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[1] Greek *Acta*, § 6 (Bonnet, p. 7). The incident is repeated in the *De Miraculis*, the *Passio*, and the Golden Legend.

[2] *Contra Faustum*, xxii, ch. 79 (in Migne, *Patr. Lat.*, xlii, col. 452). St. Augustine traced the unchristian tendencies to Manichean influence.

[3] The dates are not mentioned either in the Greek *Acta* or in the *De Miraculis*, but occur in the *Passio* and the Golden Legend.

ONE OF THE TWO ST. THOMAS BOWLS AT BETHLEHEM

married couple; the bridegroom holds in his hand a forked branch with a fruit on each limb, the design suggesting that the artist was unfamiliar with the date-palm.

The interpretation of the next scene is not certain, but it may well represent St. Thomas as architect, explaining to King Gondopharnes his plan for the projected palace. The king holds a bowl, perhaps containing gems or gold, as payment; the apostle has in his hand some instrument which may relate to his assumed profession. The figure with raised hands behind may be Abbān, though he has neither spurs nor sword. The legend relates that the king agreed with St. Thomas for the erection of a palace, and went away for a long time, leaving him a large sum of money. The saint carried out no building works, but distributed the money amongst the poor.[1]

The next scene illustrates an episode also occurring during St. Thomas's stay in the kingdom of Gondopharnes. It seems to represent one of the later interpolations in the story and not to be derived from the Greek *Acta* or from the *De Miraculis*. The apostle asks that there may be an assembly of the whole people. A great multitude of the sick and infirm come together, for whom St. Thomas makes intercession. The *Passio* continues thus: 'And when those who had already received his teaching said "Amen", there descended on them a blinding light, so that they seemed to have been struck by lightning. And all, with the apostle, lay prostrate for the space of about half-an-hour. Then the apostle rising up, cried aloud, saying: "Arise, for my Lord Jesus Christ is come as the lightning, and He shall make you whole." Then they all arose healed, and glorified God and Thomas his apostle.'[2] On the bowl we see the blinding light as a segment of the sky with stars and issuing rays. The people are represented by two kneeling persons, apparently royal.[3]

The last of the scenes round the sides of the bowl shows the apostle standing by a large font in which are three female figures: on the opposite side is a maid holding a cloth or towel.

This scene probably represents the baptism of the family or court of Misdaeus, described as king of 'India Superior', beyond the country of Gondopharnes. St. Thomas is stated to have baptized several persons of note: Mygdonia, wife of Charisius, a relative of the king; Tertia, the queen, and others;

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[1] Greek *Acta*, 17 (ed. Bonnet, p. 14 f.); *De Miraculis* (Bonnet, p. 102); *Passio* (ed. Bonnet, p. 140); Golden Legend. How the Saint escapes the difficulty when the king returns and finds nothing done may be read in all the sources.

[2] *Passio* (ed. Bonnet, pp. 143–5). The episode is repeated in the Golden Legend.

[3] In the corresponding scene on the Bethlehem bowl they both wear obvious crowns; the descending light is replaced by a large bird flying down. On the second Bethlehem bowl, however, just such a starry segment as that of the present scene, but with an angel emerging from it, marks the subject of the saint's decapitation.

but it is not clear that they were all baptized together: this is probably a convenient abridgement on the part of the artist. The large font for immersion should be noted.[1]

In the centre of the bowl we see Thomas led bound before King Misdaeus, whose wrath he has incurred by persuading the queen Mygdonia and others to renounce all conjugal relations.[2]

It has been already mentioned that as regards the treatment of their subjects the four St. Thomas bowls form two pairs, the examples in the British Museum and the Louvre each agreeing in the main with one of the two at Bethlehem, and differing from each other. But neither in the scenes nor in the inscriptions is the agreement perfect; there is no exact reproduction. Thus in the bowl at Bethlehem corresponding to ours, the forms of individual letters may differ from the corresponding letters on the British Museum example, while the additional words: FIDES KARITAS are prefixed to the first of the Latin verses.[3] Similarly in the case of the episodes from the legend; though some of the scenes agree, details in more than one case are different: the saint holds a book while blessing Dionysius and Pelagia; instead of the *coruscatio* in the sky, in the scene representing the healing of the multitude, a large bird, as already noted, flies down holding some object in its beak; in the baptismal scene, there are four figures in the font in place of three.

We shall return later to the St. Thomas bowls, when we come to consider the whole class of engraved bowls in their relation to each other and to the art of their time.

II.

The Cadmus bowl.[4]

This bowl (fig. 3) was brought up from the bed of the Severn on 11th June 1824 during the construction of a pier of the Haw Bridge between Tewkesbury and Gloucester. About a month later (July 9th) a second bowl of the same size

[1] Baptism by immersion in large tub—or vase-like fonts—is represented in the art of the twelfth century. See below, p. 154.

[2] For the final events at the court of Misdaeus, see the Greek *Acta* (Bonnet, pp. 55 ff.), the *De Miraculis* (*ibid.*, pp. 104 ff.), the *Passio* (*ibid.*, pp. 147 ff.), and the Golden Legend. On the Louvre basin, and its parallel at Bethlehem, the decapitation of the saint with a sword is shown.

[3] The introduction of these words should be noted in connexion with the group of engraved bowls with the Virtues and Vices, where the figure of Charity is especially prominent (cf. p. 150 below).

[4] The name is given for brevity in reference; it is derived from the figure in the centre of the bowl. The diameter of the bowl is 10¼ in., its depth 1⅞ in. It was first acquired by the keeper of the Ferry House, Haw Passage. It next belonged to Mr. James Ballinger, landlord of the Haw Bridge Inn, after whose death it was sold, its last possessor being Sir James Agg Gardner. The Scylla bowl was brought by Mr. Jer. Hawkins, from the finder, Ben Jones. At the sale of Mr. Hawkins's
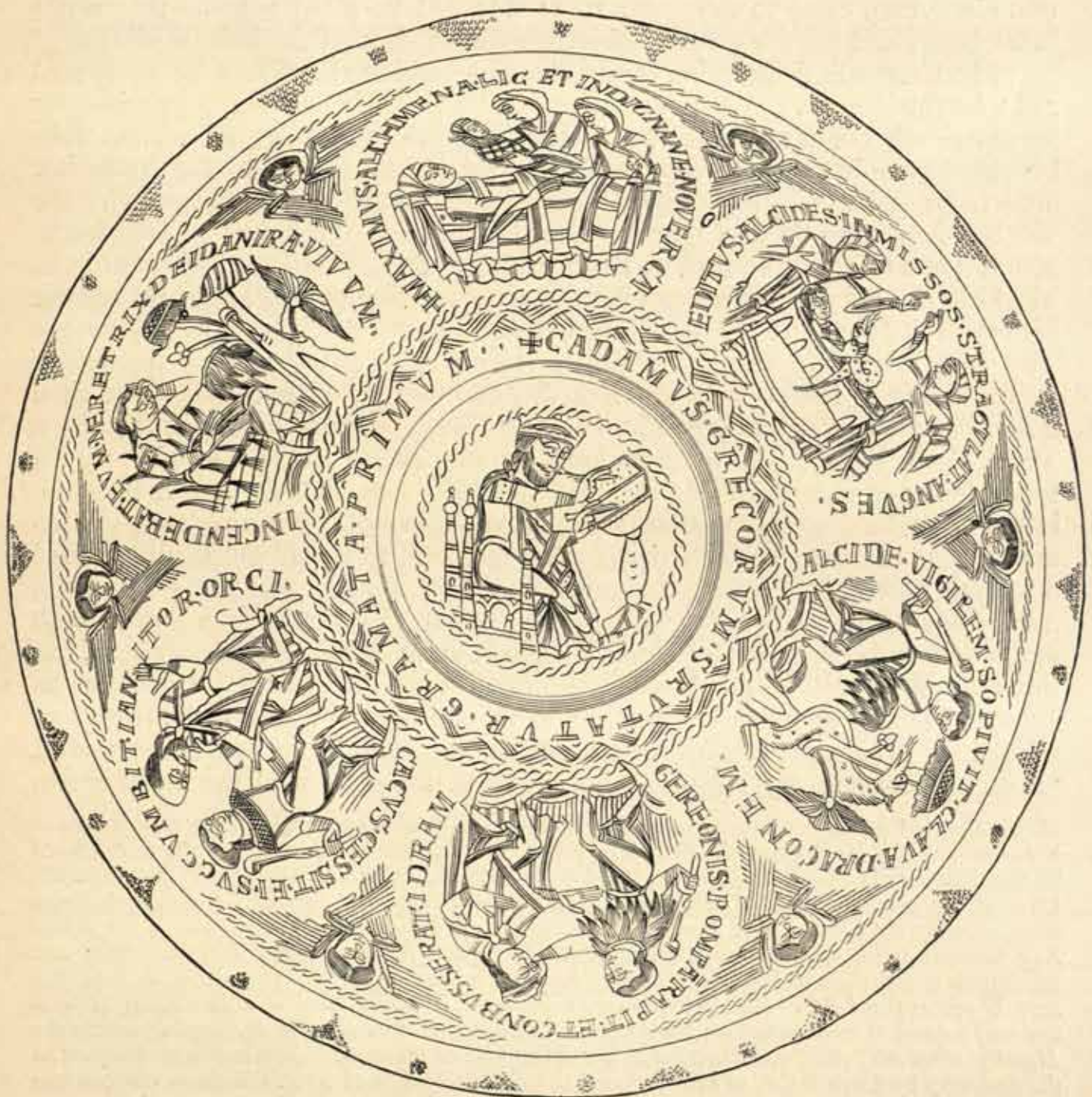
Fig. 3. The Cadmus Bowl.

and ornamented with similar mythological scenes in a corresponding disposition was discovered close to the same spot; this will be alluded to as the Scylla bowl, because it has for central subject Scylla cutting off the hair of Minos.

Mr. Counsel's description of the Cadmus bowl in the *Gloucester Journal* is not without interest. We should infer that he was primarily an epigraphist, for he practically confines himself to the lettering. A friend, the Rev. T. D. Fosbrooke, gave him a useful hint which might have led him to the truth, but unfortunately an epigraphic fancy inclined him towards the Tudor period. He did, however, note the fact that the Haw belonged to the Priory of Deerhurst, which down to 1250 was subject to the Abbey of St. Denis, but afterwards to Tewkesbury Abbey. This is a circumstance which may well have affected the history of the bowls; they may have belonged to the priory. To Mr. Wilks the Tudor attribution appears 'very sattisfactory'. Two letters, dating apparently from 1866, and preserved in the British Museum, show that about that time a Mr. Patterson was interested in the Scylla bowl. One is written to him by a Mr. J. Scott Porter, who after making a really useful suggestion with regard to the hexameter surrounding the central subject of Scylla, strays from the truth in the opposite direction to that taken by Mr. Counsel. Whereas that gentleman makes the date more than 300 years too late, and calls the Cadmus bowl a wassail bowl, Mr. Porter puts its companion a round 1,000 years too early, and brings it into connexion with pagan ritual. For him it is a sacred dish employed in the festivals of Ceres. He places it not later than A.D. 200, but thinks it might well be much older, and might even have come to Britain as an antique from Gaul or Italy. He, like Mr. Counsel, had a clue to the truth and missed it. He notices the very medieval type of the crowns represented. 'I cannot conceal my surprise', he says, 'that the form of the royal crown

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effects after his death, it was purchased by a Cheltenham bookseller named Williams, from whom it was acquired by Mr. Lawrence. Both bowls have been exhibited at meetings of the Society, and briefly described in *Proceedings*, the Scylla bowl by Mr. W. L. Lawrence, F.S.A., in 1860, when the Director, Mr. (afterwards Sir) A. W. Franks gave the description (*2nd Series*, i, p. 235); the Cadmus bowl, again by Mr. Lawrence, in 1873, when it was already in possession of Mr. (afterwards Sir James) Agg Gardner (*ibid.*, v, p. 444), a short account being given by Mr. Knight Watson. Brief and unscientific descriptions had appeared in 1824 and 1825 in the *Gentleman's Magazine*, xciv, ii, p. 164; xcv, i, pp. 417 and 605. No illustration was published in *Proceedings* of either bowl; hitherto the only published representations have been a small and poor woodcut of the Scylla bowl in the *Monthly Magazine*, 1825, p. 218, and a larger lithograph of the same object, issued in the year of the discovery by Clark & Co., of Birchin Lane, Cornhill, and engraved by F. Whishaw. Engravings of both bowls were made by W. Macarty, apparently at South Kensington, in the second half of the nineteenth century, but they do not seem to have been published: the copper plates are in the possession of the Society of Antiquaries. The Cadmus bowl is described at length in a curious MS. note-book of a Mr. Wilks, written in 1827. The description is partly based on an article by Mr. G. W. Counsel in the *Gloucester Journal* of 19th July 1824, but includes diverse interpretations by various learned antiquaries of the day. The note-book is in the British Museum.

resembles so closely the mediaeval; but perhaps other antiquaries may be able to remove this difficulty.' Such errors in interpretation, however, are venial enough at a time when the comparative study of medieval art had hardly begun. Caspar Orelli himself, as Mr. Franks reminds us, included the inscriptions of the Scylla bowl in his *Inscriptionum Latinarum Selectarum Collectio.*[1] No doubt he had not personally seen the bowl, and some friend in England sent him a copy of the verses; still, he was a Latinist, and it is strange that he should apparently have accepted as Roman a set of debased hexameters of which the medieval construction seems obvious. But it was perhaps not so unnatural even for the learned of those days to go astray on the difficult ground of early medieval use of classical sources. In the twenties of last century scholarship had not begun to take such matters very seriously. With all the advantages gained for us by the medieval research carried on during the last hundred years, it still remains difficult to date these bowls with precision. The presumed mistakes of our predecessors are therefore set down here, not in a critical spirit, but to illustrate the level at which medieval studies remained until exact methods were applied in this field of inquiry.

The subjects of the Cadmus bowl are disposed in six medallions representing the Birth and Labours of Hercules, engraved on the inner sides, and surrounding the central medallion in which Cadmus is seen writing at a desk much as an Evangelist might appear in an early medieval MS. All the medallions are, as it were, framed by circular inscriptions in capitals, each forming a rude hexameter. Round Cadmus himself we read:

<div align="center">+CADAMVS GRECORVM SRUTATVR GRAMATA PRIMVM.</div>

In the first of the medallions of the Hercules series we see Alcmena recumbent upon a bed, beside which are two female figures, one holding the swathed infant:

<div align="center">+MAXIMVS ALCHMENA LICET INDIGNANTE NOVERCA.</div>

Next to this is the strangling of the serpents sent by Juno. The infant Hercules lies in a cot grappling with the snakes, while two female figures stand near:

<div align="center">+EDITVS ALCIDES INMISSOS STRAGVLAT ANGVES.</div>

Next comes the slaying of the dragon which guarded the apples of the Hesperides; the hero wields his club and wears his lion skin:

<div align="center">ALCIDE VIGILEM SOPIVIT CLAVA DRACONEM.[2]</div>

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[1] Zürich, 1828, ii, no. 4311. The inscription is described as that of a bronze vessel: *vasis aerei figurati reperti in alveo fluminis Sabrinae in Britannia.* Cf. also *Bulletin des Sciences historiques*, Nov. 1827, p. 370.

[2] For other examples of this subject cf. pp. 152-3. An early medieval bronze bowl in the British Museum, presented by Mr. Soden Smith in 1884, is very rudely engraved with a similar scene.

After this we find two Labours mentioned in a verse surrounding the representation of only one. Geryon, the three-headed monster, is seen in the guise of a king with one head only.[1] The last three words of the verse allude to the legend that Iolaus helped Hercules to burn away eight of the hydra's heads:

GEREONIS POMPA RAPIT ET CONBVSSERAT IDRAM.

We next see the defeat of Cacus in the form of a mild-looking bearded man with a bald forehead. As in the last case, a second unrepresented Labour, the overthrow of Cerberus, is worked into the single verse:

CACVS CESSIT EI SVCCVMBIT IANITOR ORCI.

Lastly, we have the death of the hero, enveloped in the flames of the garment sent him by Deianira:

INCENDEBAT EVM MERETRIX DEIDANIRA VIVVM.

The spaces between the medallions are filled by seraphim, types which are frequent enough in Romanesque art, and might have served to prevent the Roman attribution suggested by some at and after the time of discovery.

The Scylla bowl has exactly the same disposition of six medallions, each enclosed in a border formed by a hexameter descriptive of the scene. Here, in the central medallion, is Scylla, daughter of Nisus of Megara, who fell in love with Minos, besieger of her father's city. She cuts off the purple lock on the crown of Nisus's head on which his life depends, seeking thereby to purchase the favour of Minos. Nisus is seen on a bed, behind which stands Scylla holding in one hand shears, in the other the lock of hair:

SCILLA METENS CRINEM MERCATUR CRIMINE (MINO).

Round the sides of the bowl two medallions represent the story of Ganymede: his seizure by the eagle, and his service in Olympus as cupbearer of the gods:

1. ARMIGER ECCE IOVIS GANIMEDE SVSTVLIT ALIS
2. PORRIGAT VT CIATOS DIS CONVIVATIBVS APTO(S).

The two next medallions treat the story of Eurydice in a similar way: Proserpine orders the release of Eurydice; Death snatches back Eurydice as she follows Orpheus to the upper world:

1. LEGIBVS INFERNI MOTIS PROSERPINA REDDI
2. EVRIDICEN IVSSIT SED EAM MORS ATRA REDVXIT.

The last two scenes present the story of Triptolemus, son of Ceres. The goddess gives instructions to her son; from his seat astride of the dragon he scatters seed around him:

1. MATER LARGA CERES MISERATA FAME PEREVNTES
2. TRIPTOLOMI MANIBUS COMMISIT SEMINIS VSVS.

[1] Geryon was regarded as a king (see below, p. 148, n. 3).

Between the medallions, seraphim are seen as in the previous example. The two bowls are so nearly related in the arrangement of their subjects, in the character of the inscribed verses, and in their general style that they must have a common source. They may even have been used together, as were the gemellions of Limoges.

These bowls from the Severn are not the only examples deriving their subjects from the pagan classics. A near parallel is afforded by the bowl with scenes from the life of Achilles in the Cabinet des Médailles at the Bibliothèque Nationale, Paris.[1] Here the subjects, with the exception of that in the centre, are not in medallions, but in compartments divided by columns above which the inscriptions are placed; but the style is closely similar, both generally, and in certain details,[2] and the descriptive legends are also in medieval hexameters. The subjects are based, directly or indirectly, upon the *Achilleis* of Statius, actual phrases from the poem being incorporated. It can hardly be doubted that the Achilles bowl was made in the same region and under the same influences as those found in the Severn. Another example with classical subjects, in the Historical Museum at Frankfort-on-the-Main, is engraved with scenes from the life of Myrrha, the mother of Adonis, again surrounded by legends forming enclosing circles, as on the Severn examples;[3] several bowls with biblical scenes are treated in the same way, and only to be distinguished by the character of their subjects. To these reference will be made below (p. 149).

No surprise need be expressed at the appearance of pagan classical stories in medieval objects of art dating from the Romanesque period, for the classical studies pursued from the days of Cassiodorus through Carolingian times, never wholly intermitted, were revived in the eleventh century, and flourished through-

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[1] M. Prou, *Gazette archéologique*, 1886, pp. 38 ff., and pl. v; E. Molinier, *Histoire des arts appliqués à l'industrie*, IV, *L'Orfèvrerie*, pp. 172. The scenes with their inscriptions are as follows: Chiron teaching the young Achilles: *Heroum laudes cantant Chiron et Achilles*. Thetis, dreading the conscription of Achilles for the Trojan war, carries him off in a car drawn by gryphons to King Lycomedes: *Ecce soporantem Thetis deportat Achillem*. Thetis introduces Achilles, dressed as a girl, to Lycomedes and his daughters: *Hanc tibi comendo germanam rector Achillis*. Ulysses sent to detect Achilles, discovers him by a trick: *Artibus Ulixis dum proditus esset Achilles*. Lycomedes begs Achilles to remain, but he follows the signal for departure: *Discindit vestes quia toto in pectore Troia est*. Before leaving he confesses his love for Deidamia, and asks her hand: *Te rogo pro venia cum supplice Deidamia*. Lastly, in the centre of the bowl, the sailing of Achilles for Troy: *Abripitur terris in otho stidente (notho stridente) propinquis*.

[2] The curiously ugly profiles of several women; the convention used to represent the eyes; the treatment of hands; the type of the dragons drawing the car of Achilles; the 'mushroom' tree near Chiron, etc.

[3] A. Wormstall, in *Zeitschrift für christliche Kunst*, x, p. 249, 250. A. Kisa, *ibid.*, xviii, 1905, p. 368. Not having seen the bowl for a long time, I cannot say whether it is characterized by the same style.

out the twelfth.[1] Though Ovid was not always regarded with favour by the Church, his poems were exceedingly popular, especially the *Metamorphoses*.[2] But Virgil and Statius were also favourites, and both had their *scholia*, with which the monastic scholar was familiar. Collections of mythological tales, made by professed mythographers such as Fulgentius, were the inspiration of medieval writers like John of Salisbury (*c.* 1110–89), who illustrated philosophical themes by classical tales interpreted in an allegorical sense.[3] The rise of religious philosophy, indeed, instead of destroying mythology, gave it new life. The moralizing of myths had begun at an earlier date. Fulgentius, whose exact date is uncertain, but who was still in a more or less direct connexion with antiquity, himself gave a moral explanation to the tales, and in this he was followed by three mythographers whose MSS. are at the Vatican, the two earlier being of Carolingian date, the third, and most informative, writing towards the twelfth century.[4] We may particularly note, with reference to the Cadmus bowl, that this author moralizes the Life and Labours of Hercules, and that he and his predecessors make allusion to artistic representation of classical

[1] Priscian, Boethius, and the early *scholia* to Virgil and Statius maintained the tradition, and in the later middle ages our own Chaucer drew upon such sources. For the survival of classical studies in the middle ages see J. E. Sandys, *A History of Classical Scholarship*, Cambridge, 1903, ch. xxxii: 'The survival of the Latin classics'; O. Gruppe, *Geschichte der classischen Mythologie*, supplement to Roscher's *Lexikon*; G. H. Bode, *Scriptores rerum mythicarum Latini tres, Romae nuper repertae*, 1834; M. Manitius, *Geschichte der christlich-lateinischen Poesie bis zur Mitte des 8. Jahrhunderts*, 1891, and *Gesch. der lateinischen Litteratur des Mittelalters* in Ivan Müller's *Handbuch der klassischen Altertumswissenschaft*, ix, 1911; F. Piper, *Mythologie der christlichen Kunst*, 1847; Ampère, *Hist. litt. de la France avant le xii* siècle, iii, ch. xxii, p. 457. R. Dernedde, *Ueber die den altfranzösischen Dichtern bekannten epischen Stoffe aus dem Altertum*, 1887, is chiefly concerned with the Gothic period.

[2] He seems to have been at one time banished from the schools, except in the form of a book of excerpts. The middle ages probably had Commentaries on the *Metamorphoses* (Gruppe, as above, p. 2). Herbert de Losinga, bishop of Norwich (d. 1119), had a dream warning him to renounce the reading and imitation of Ovid (Sandys, p. 595). But in the twelfth century the *Metamorphoses* became a school book, and an acquaintance with Ovid a necessity for the cultured. His works, indeed, were treated almost as a kind of pagan bible (Gruppe, p. 16).

[3] To John of Salisbury the *Aeneid* was an illustration of practical philosophy. In the same way, Bernard Sylvester of Tours (*c.* 1150) saw in the *Aeneid* an allegory of human life, Aeneas representing the human soul. Bernard was able to read the whole Platonic philosophy into the classical myths (Gruppe, p. 15). The *Ars Amoris* of Ovid was moralized for the reading of nuns (Sandys, as above, p. 615). Sandys also draws attention to the fact that Dante in his *Convito*, regards Ovid as susceptible of allegorical interpretation (ii, 1 ; iv, 25, 27, 28).

[4] Bode, as above. The ninth century was a great period for mythography. Theodulf the Visigoth (d. 821), Dunchad and Johannes Scotus, two Irishmen, and Remigius of Auxerre, their pupil, are all of this age, and all see a secret meaning in the old mythological stories. The Third Vatican Mythographer, sometimes called Albericus, also wrote a work styled *Poetarius*, or *Libellus de imaginibus deorum*.

myths.[1] It is of interest to observe that England seems to have taken a rather prominent part in the study of mythology and in its allegorization. The Third Mythographer, whether rightly named Albericus or not, was held by Gruppe to have been in all probability English;[2] and when mythological studies were applied to philosophy, we find English names prominently associated with them. Baldwin (born in Exeter, bishop of Worcester 1180, d. 1190) wrote a *De Mythologia*, and John of Salisbury, who died at Chartres in 1180, has been already noted as learned in this kind. One of the oldest moralized editions of Ovid, the *Integumenta super Ovidii Metamorphoses*, appeared under the name of Johannes Anglicus. But the monasteries in the valleys of the Rhine and Meuse, the region surrounding the old Carolingian capital of Aix-la-Chapelle, were especially famous for their scholarship and their study of the Latin authors. Here the classical tradition was most firmly established;[3] here, too, were many centres famous for the practice of the arts (see below, p. 156).

From the above it will be sufficiently clear that the use of themes from classical mythology such as we see upon the Cadmus and Scylla bowls, was quite common in the centuries preceding the rise of Gothic art. The juxtaposition of subjects having no very obvious connexion with each other may, in some cases, perhaps be explained by their derivation from mythographic manuals where episodes were assembled without much regard for logic or system.[4] But generally there was more method than at first meets the eye, and the treatment

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[1] They seem to refer especially to MS. illumination (we may recall the mythological detail in the *Hortus Deliciarum* of Herrade of Landsperg), but the existence of such objects as these bowls shows that the stories were illustrated in other media. Cf. also F. Piper, *Mythologie der christlichen Kunst*, 1847, pp. 26, 33, 242. The frequency of pagan motives on mosaic pavements of the Romanesque period in Italy has long been remarked (E. Müntz, *Études iconographiques et archéologiques sur les mosaïques chrétiennes de l'Italie*, 1874-84, nos. III and IV); it is in curious contrast with the usage in the case of surviving mural mosaic, which is nearly always religious. At Pavia, we have Theseus slaying the Minotaur, balanced by David slaying Goliath, both scenes accompanied by Leonine hexameters. Theseus was a favourite subject, occurring in other churches, and was clearly employed in a moralizing sense. In the cathedral of Pesaro we see the rape of Helen. Several of the Italian mosaics are illustrated by E. Aus'm Weerth, *Der Mosaikboden in S. Gereon zu Cöln*, Bonn, 1873, and by Venturi, *Storia dell' arte italiana*, iii, pp. 420 ff., figs. 396 ff., but the German instances given by Aus'm Weerth show that such subjects were popular north of the Alps. The field of Romanesque sculpture yields examples enough of classical figures: to quote but one instance, Hercules with the Nemean lion is seen in relief on the cathedral of Borgo San Donnino; minor sculpture on ivory should also repay examination from this point of view. Among examples in textile fabrics, we may notice Hercules killing the dragon on the gold-embroidered mantle of the Emperor Henry II in Bamberg Cathedral, with its legend: *Hercules serpentem occidit aurea mala servantem*. On this mantle, dating from the early eleventh century, are also the signs of the Zodiac and several constellations, some of which, e. g. Andromeda, are rendered by classical types (Bock, *Kleinodien des heiligen römischen Reichs*, pl. xli).

[2] As above, p. 14. [3] Sandys, as above, p. 613.

[4] For instance the popular *Fabulae* of Hyginus, to whom allusion has already been made.

is really of the moralizing order. Thus a moral link may be found between the Labours of Hercules and the beneficent work of Cadmus; even the association of the deed of Scylla with the beneficent activities of Triptolemus may be justified by some subtle line of interpretation. The significance of Hercules is clear: he is the personification of *virtus* in the wide classical sense, of vigour and of all helpfulness;[1] the monsters and other opponents overthrown by him are forces of evil. The Third Mythographer even specifies the vices for which they stand. Thus Cacus (κακός, *malignus*) is the evil nature; Cerberus, earthliness and devouring greed. It is easy to perceive the symbolic meaning of Ceres and Triptolemus or of Orpheus; nor is the description of the apples of the Hesperides as the fruits of philosophy too far-fetched.[2] Sources for all the subjects on the bowls, in addition to the Labours,[3] are to be found in the books mentioned above. Cadmus appears in Hyginus among the *Rerum inventores primi*,[4] and the other subjects on the Scylla bowl are all found in the mythographers.[5]

Concluding this part of our subject, we may fairly say that the mythological scenes on the two Severn bowls are wholly in keeping with the period to which we believe these bowls to belong; they are no less congruous with Romanesque art than the 'Triumphs' of Petrarch, for example, with Italian art of the fifteenth century.

Relatively rare though the bowls with mythological subjects may be, they are not an isolated class; they are connected by many links with another small group in which scenes from the Bible are treated in exactly the same fashion, and disposed round the sides in a similar way. A bowl with the story of

[1] In mind as well as body: *constat enim Heraclem fuisse philosophum* (Servius). Atlas is said to have taught the hero astronomy; hence his labours correspond to the twelve zodiacal signs. The Labours are related in the twelfth book of the *Metamorphoses*, and, of course, by all the mythographers.

[2] Fulgentius refined on this simple idea by declaring that the three Hesperides, *Hesperis, Medusa*, and *Phaethusa*, signified respectively *intellectus, memoria*, and *facundia*.

[3] We detect, in connexion with the *immissos strangulat angues* of the scene in which the infant Hercules strangles the serpents, the phraseology already borrowed of the First Vatican Mythographer: *angues immissos ei novercalibus odiis* (nos. 50, 148). The story of Deianira and the shirt of Nessus is given by the same writer, no. 58. With reference to the appearance of Geryon as a king whose crown is taken from him, we may recall the fact that the Second Vatican Mythographer describes Geryon as King of the Balearic Isles (no. 152).

[4] *Fabula*, cclxxvii, where it is said of the introduction of letters: *Mercurius in Aegyptum primus detulisse dicitur, Cadmus in Graeciam.* Cf. A. von Staveren, *Auctores mythographi Latini*, 1742, p. 398. Cadmus is mentioned in the *Metamorphoses* for other reasons than his introduction of letters into Greece.

[5] Scylla and Nisus, *Vatican* I, no. 3; Ganymede, *ibid.*, no. 184, and *Vat.* III; the eagle is described as *armiger Iovis*, as on the bowl; Eurydice, *Vat.* I, no. 76, II, no. 44, III; Triptolemus, *Vat.* II, no. 98, I, no. 8, where winged 'serpents' are mentioned.

Samson, now in the Kunstgewerbe-Museum at Cologne, formerly in the Scheffler collection at Vienna and the Lanna collection at Prague,[1] well illustrates the relationship, which is natural enough when we remember the ethical meaning conveyed by mythological motives. The scenes on the Cologne bowl, derived from the Book of Judges, are in medallions, framed, as in the case of the bowls from the Severn, in their own descriptive legends, which are in medieval hexameters of precisely the same character. By virtue of the analogy between the feats of Samson and those of Hercules, this example affords a particularly good transition between the bowls with classical and those with scriptural subjects. The two classes run into each other; in each case there is a 'morality' enforced by similar action. A second bowl with a Bible story is preserved at Trèves: it has the parable of the Good Samaritan,[2] the scenes being again enclosed in their own Latin legends. Another bowl in the Suermondt Museum at Aix-la-Chapelle has the story of St. Ursula, treated in a style presenting analogies to that of the Trèves example.[3] From these religious types we pass naturally to a group equally didactic in character, the subjects of which are derived from moral philosophy as presented by Christian writers from the time of Prudentius to that of the Scholastics, who fully recognized the virtue of great pagan thinkers like Socrates, Plato, and Aristotle, and associated their doctrine with that of Holy Writ. This association is clearly enforced on two remarkable bowls, one in the church of St. Victor at Xanten, with *Sapientia* between SS. Peter and Paul, and the Seven Gifts of the Spirit, represented by figures of prophets;[4] and the somewhat similar example from Buer in Westphalia in the possession of the Society of Antiquaries of Münster in Westphalia with *Philosophia* in the centre, between Socrates and Plato, and round the interior, six wise men of antiquity, each having near him a small personification

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[1] *Collection Lanna* (by J. Leisching), ii, 1911, no. 1236; Kölnischer Kunstgewerbe-Verein: *XXI. Jahresbericht des Kunstgewerbe-Museums der Stadt Köln für 1912*, pp. 14 ff.; Th. von Frimmel, *Ueber eine Bronzeschüssel, etc.: Mittheilungen der k. k. Central-Commission für Erforschung ... und Erhaltung von Baudenkmalen*, new series, xii, 1886, pp. 11 ff.; P. Clemen, *Die romanische Monumentalmalerei in den Rheinlanden*, 1916, p. 152. In the case of this bowl, the general character rather leads us to suspect a similarity in style to the Achilles bowl at Paris and to the Severn examples. The identical character of the verses can be more easily judged: *Votis natus erit qui Deus ipse sacravit, Ecce parit sterilis sic urgent iussa Tonantis. Brachia Samsonis domuerunt ora leonis. Hic alienigenae Samson copulatur amicae*, and four other verses of like construction.

[2] Aldenkirchen, *Drei liturgische Schüssel des Mittelalters*, in *Bonner Jahrbücher*, lxxv, 1883, pp. 54 ff.; *Zeitschrift für christliche Kunst*, 1905, p. 367.

[3] *Bonner Jahrbücher*, as above; *Zeitschrift*, as above, p. 366.

[4] J. Aldenkirchen, *Bonner Jahrbücher*, lxxv, 1883, p. 54, pl. iv; J. B. Béthune, *Revue de l'Art chrétien*, iv, ser. iv, p. 325, 1886. P. Clemen, *Kunstdenkmäler der Rheinprovinz*, i, p. 385; F. X. Kraus, *Die christlichen Inschriften der Rheinlande*, pt. ii; 1894, no. 630; A. Kisa, *Zeitschrift für christliche Kunst*, xviii, 1905, p. 294.

of the science which he represents.[1] The whole treatment finds a close analogy in a miniature of the *Hortus Deliciarum*, where we also see Philosophy with Socrates and Plato, here seated at desks, like Cadmus.   Below the two greater philosophers are four other seated figures styled *poetae vel magi*; in arcades round the central subject are the Seven Liberal Arts.[2]

From examples of the above kind the passage is easy to the large series of bowls engraved with Virtues and Vices which have been studied at length by A. Kisa and others.[3]   These bowls, with designs varying greatly in the number of figures and in the quality of the work, survive to the number of more than a hundred, and have been found not only in different parts of western Europe, but in especial numbers in East Prussia; it has been conjectured that their wide distribution is due to the activities of the Hansa League.   Conspicuous among the Virtues, and often represented alone, is a crowned female figure holding up a disc in each hand.[4]   This is probably Charity (*Caritas*), and it has been conjectured that the discs may represent the consecrated bread.   It is interesting

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[1] A. Wormstall, *Zeitschrift für christliche Kunst*, x, 239 ff.   Inscriptions on the bowl are based upon Cicero, Boethius, and Priscian.

[2] Ed. Straub and Keller, pl. xi *bis*; abundant inscriptions accompany the figures.   The general arrangement, as in pls. xxii and xxiii, suggests that of a rose window, but the central subject surrounded by a ring of medallions or radiating compartments, has also recalled to one authority the disposition seen on the gilded glass disc of Early Christian times found at Cologne, and now in the British Museum (*Guide to Early Christian and Byzantine Antiquities*, 2nd ed., fig. 91); he supposes that the makers of the bowls may have copied some such an antique original, and thinks that we may have here an argument in favour of Cologne as a place of origin.   It is true that a resemblance exists; but some such disposition is imposed by the very form of the object to be decorated, and we need not push the argument too far.   Some bowls have a symmetrical arrangement of lobes surrounding a central medallion, or there may be two successive circles of lobes, lending the design a resemblance to an expanded flower; the lobed paten in the Guelf Treasure, associated with the name of St. Bernwardt of Hildesheim, may be recalled in this connexion (W. A. Neumann, *Der Reliquienschatz des Hauses Braunschweig-Lüneburg*, 1891, p. 294, no. 65).   The old radial disposition, with an arcade surrounding a central circle, survived the middle ages, and is found even on carpets (A. Prokop, *Der Teppichschatz im Besitze des Mährischen Gewerbe-Museums in Brünn* in *Mittheilungen der k. k. Central-Commission*, etc., new series, xiii, Vienna, 1887, p. vi, and fig.).

[3] *Die gravierten Metallschüsseln des XII. Jahrhunderts* in *Zeitschrift für christliche Kunst, XVIII*, 1905, pp. 227, 294, 365; E. Schwedeler-Meyer, *Die Darstellungen von Tugenden und Lastern an einem gravierten Bronzebecken des XII. Jahrhunderts*, in *Mittheilungen der Gesellschaft für Erhaltung der geschichtlichen Denkmäler in Elsass*, Strassburg, 1897.

[4] As in the elaborate bowl at Aix-la-Chapelle (Kisa, p. 227).   A good example in the British Museum, said to have come from Ghent, has the Vices only, as seated female figures holding up discs (?) in both hands; each is in a medallion with surrounding legend giving the name of three vices. Another bowl in the same collection has a central seated figure with four others round the sides in medallions; there are no inscriptions.   This bowl was excavated at a depth of 10 ft. while digging the foundations of the London and Westminster Bank in Lothbury, City of London, about 1838, together with another bronze bowl, also in the Museum, with very rough figures of lions (?) under arcades round the sides (C. Roach Smith, *Archaeologia*, xxix, 1842, p. 368, pl. xxxix).

to note that on Nicolas of Verdun's enamelled altar-piece at Klosterneuburg near Vienna a personification of KARITAS holds in one hand such a disc, and in the other an object resembling a flask.[1] It has been observed by Kisa that the bronze bowls with the different kinds of subjects (mythology, biblical history Virtues, and Vices) have sometimes been found together,[2] a fact confirming the belief that though some groups may be rather earlier than the rest, none is very far removed from the others in date. The occurrence of the words FIDES KARITAS at the beginning of the legend on one of the St. Thomas bowls at Bethlehem may point to some contact between the several types.

The uses to which these engraved bowls were applied were probably both secular and religious. The Cadmus and Scylla bowls, and their correlatives with classical subjects, as Mr. Franks suggested,[3] may have been equivalents of the well-known enamelled examples from Limoges, carried round between the courses at table, that the guests might cleanse their fingers;[4] as above noted, these two may have formed a pair, like the gemellions. Even bowls with allegorical figures, such as Virtues and Vices, may have been used for this purpose.[5] But such bowls as those with the legend of St. Thomas may have had a liturgical use; they may have served to contain the water in which the celebrant washed his hands at the altar.[6] The term 'liturgical bowls' or basins, which has been very generally adopted, may perhaps be accepted for a certain number. Some examples may have been used at the rite of baptism; the silver Cappenberg bowl (see below, p. 154) is thought to have been made for this purpose. In East Prussia some religious association is suggested by the fact that bowls with the Virtues in so many cases have been found on burial sites.[7] It is surmised that two bronze bowls belonging to a different category from those forming our subject, but at a date perhaps still earlier, may have served to contain the consecrated oil used at the dedication of churches;[8] this would in any case be a rare use, but the point at any rate deserves a passing mention.

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[1] K. Drexler, *Der Verduner Altar*, Vienna, 1913, pl. xviii. The symbolism may perhaps relate to the food and drink which are among the first gifts of charity, rather than the elements of the Eucharist. In a bowl at Berlin, engraved with the Virtues and Vices, the centre is occupied by Humility, holding up a book in each hand (W. Vöge, vol. iv of the Kaiser-Friedrich-Museum catalogues; *Die deutschen Bildwerke*, etc., 1910, no. 464, and pl. iii).

[2] p. 370.   [3] *Proceedings*, 2nd ser., i, p. 237.

[4] It is interesting to note the occurrence of a spout on the edge of the ' Wisdom' bowl at Xanten (Kisa, p. 294; Aldenkirchen, *Bonner Jahrbücher*, Heft 75, 1883, p. 54).

[5] Perhaps first in monasteries (Schwedeler-Meyer, as above, p. 220).

[6] It has been already noted that the central figure in many Virtue and Vice bowls often holds disc-like objects in her raised hands, by some conjectured to represent wafers.

[7] Kisa, pp. 297 ff.

[8] These bowls, one found at Halle, the other near Fellin in Livonia, have in their centres embossed silver medallions representing an emperor, crowned and wearing a mantle fastened on one

Various questions remain to be decided: the date of the St. Thomas group, and of the class represented by the Cadmus and Scylla bowls; the locality, or localities, in which they were probably made, and the method in which the subjects were executed.

If we admit relatively wide limits, there can be little doubt as to the date both of the two bowls with mythological scenes and that with the legend of St. Thomas: they all belong to the twelfth century. But in default of documentary evidence the minor works of art in the Romanesque period are always difficult to date within a few years. During the greater part of the century fashions in weapons and costume, the changes in which help us so much in the study of Gothic times, are more permanent, and epigraphy gives little aid; here too there was little significant and progressive change. M. Prou, in discussing the Achilles bowl, experienced the difficulty caused by this conservatism, but reached the general conclusion that the date of that example was not likely to be later than 1150. This is a conclusion which may be accepted without much reserve. Not only does the treatment and feeling of all these bowls accord with that of the earlier part of the century, but various details point to the same period. We may note, for instance, the hybrid tree form, with 'mushroom' top and plant-like leaves, occurring in the Slaying of the Dragon and of the Death of Hercules. This is a type found as early as the tenth century, lasting, indeed, to the thirteenth, but especially common in the earlier half of the twelfth.[1] The dragon twined round the

shoulder. On either side of the head are the letters of the name OTTO; the surrounding legend (incomplete in one example) is: HIERVSALEM VISIO PACIS. Four repoussé silver bands with floral scrolls radiate in each case from the centre medallion, the ground between them being engraved with ornament. See M. Sauerlandt, *Hallischer Kalender*, 1914, and J. Menadier, *Deutsche Münzen*, iii, 1895, for the Halle example, and, for that from Fellin, H. von Bruiningk, *Sitzungsberichte der Gesellschaft für Geschichte und Altertumskunde der Ostseeprovinzen Russlands*, Riga, 1903, pp. 108, 159. Cf. also A. von Sallet, *Zeitschrift für Numismatik*, xv, 1887, p. 23. Von Bruiningk notes that the inscription represents the first words of the dedication hymn: *Urbs beata Hierusalem dicta pacis visio*, or (from the time of Urban VIII) *Coelestis urbs Ierusalem beata pacis visio*. He believes the bowl to date from the time of Otto the Great (936-73); and the style of the ornament makes this very probable. For information with regard to these two bowls I am indebted to the kindness of Professor Adolf Goldschmidt.

[1] The instances are very numerous. A good example is seen in the engraved portable altar by Roger of Helmershausen, dated 1118 (Falke and Frauberger, *Deutsche Schmelzarbeiten*, pl. xi). We may note examples in English MSS., especially in the Psalter painted at St. Swithun's, Winchester, about the middle of the twelfth century (British Museum, Nero. C. 4, pp. 4, 7, 9, 18, 19, 23-24), and the great Bible of the same origin and approximately the same date now in the Chapter Library at Winchester. Among German examples we may mention the Admont Bible of about 1130, belonging to the Salzburg school (G. Swarzenski, *Salzburger Malerei*, pl. xxix, fig. 99, xxxii, fig. 110); the Pericopes of St. Erentrud in a similar style (*ibid.*, pl. liv, fig. 169, lv, fig. 172). In Regensburg MSS. we see it in a Pericope book of the early twelfth century at Munich (Swarzenski, *Regensburger Buchmalerei*, pl. xxiv, fig. 60).

tree has early twelfth-century characteristics,[1] and the scene as a whole recalls that on the embroidered mantle of the eleventh century, mentioned on p. 147, n. 1, or an ivory draughtsman in the Victoria and Albert Museum,[2] where a man armed with shield and sword stands on the left before a 'plant-tree' round which a serpent is twined. There is little armour of western type on either the St. Thomas bowls or those from the Severn, but the Achilles bowl at Paris shows warriors in pointed steel caps with and without nasals, mail coats, and kite-shaped shields.[3] Swords are of the straight cross-hilted type which is too common in the middle ages to aid us in our present purpose. Costume shows, for men of lower rank or engaged in active pursuits, short tunics, low boots slit at the sides, and sometimes hose. Persons of higher station wear long tunics and mantles fastened with brooches on the shoulder; the tunics, whether long or short, often have borders at the neck and wrists, while the long ones have bands of ornament crossing them lower down. The crowns worn by the royal persons are all of early type; some are of the gable or pediment shape which goes back long before the twelfth century;[4] others show three lobes, a form frequent in the Pericope book of St. Erentrud of the Salzburg school already mentioned as probably of the first half of the century.[5] The developed floriated crown of the Gothic period, but also occurring in the twelfth century, does not appear to be used. It may be specially noted that the crowns seen in the St. Thomas bowls, the style of which at first sight suggests a somewhat later date, are all of early forms. The hair is generally worn long by both sexes; a curious feature in the bowls from the Severn is the occurrence of the above-mentioned bald-headed type with pointed beard. The churches and other structures, the seats or thrones, tables, desks and musical instruments are types with which the

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[1] It has even earlier affinities; cf. the type in the Bamberg Apocalypse of about A.D. 1000 (Wölfling, *Die Bamberger Apocalypse*, 1918, pl. xxvii, though here the monster has front legs).

[2] No. 374-1871. The 'tree' has no mushroom top but plant-like leaves and stems. For a similar scene cf. F. Piper, *Mythologie der christlichen Kunst*, 1847, p. 67. Ivory carvings and enamels of the twelfth century, notably those produced on the Meuse and Rhine, provide various details for comparison with the bronze bowls; for the secular subjects we may specially note the enamelled plaques formerly in the Llangattock collection, now in the collection Martin Le Roy (J. J. Marquet de Vasselot, *Catalogue*, i, nos. 9 and 10; H. P. Mitchell, *Burlington Magazine*, July 1919, pp. 34 ff.).

[3] The armour is closely similar in the great Bible in the Chapter Library at Winchester, already cited, probably written in the priory of St. Swithun in reign of Henry II and dating from *c.* 1150-60. (Photographs in the Victoria and Albert and British Museums, *MS. Facs. 39*; *Palaeographical Soc.*, 2nd ser., ii, pls. clxvi, clxvii; Burlington Fine Arts Club, *Exhibition of Illuminated MSS.*, 1908, no. 106, pl. lxxviii). The scene in this MS. in which David attacks the bear (*MS. Facs. 39*, p. 14) has analogies with those on the Cadmus bowl in which Hercules attacks the dragon and Geryon, the club being of the same form.

[4] e. g. in the Bamberg Apocalypse (Wölfling, as above, pls. li and lii).

[5] Swarzenski, *Salzburger Buchmalerei*, pl. li, fig. 157, lvii, fig. 181, lviii, fig. 183, etc. This three-lobed type also continued into the second half of the century.

student of Romanesque art is familiar. Another feature pointing to the twelfth century is the baptism by immersion in large tubs.[1] As far as it goes, though it is an uncertain aid, the epigraphy yields similar results. The lettering in works of industrial art seldom runs closely parallel with that of manuscripts; it is apt to lag behind. Frequently it may prefer to retain forms with the minimum of curves as long as it can, these being more suited for reproduction in hard materials; but it is probably true that in twelfth-century works of industrial art an increase in the number of uncial forms among Roman capitals is apt to mark a later period in the century.[2] On the great crown-light which hangs in the cathedral of Aix-la-Chapelle, dating from *c.* 1160–70, the blending of the two kinds of letter is frequent and apparently capricious; the different forms of the same letter often occur in the same word, and the uncial forms are numerous. But this great corona, the work of the noted civilian goldsmith and bronze caster Wibert, would perhaps be in advance of such comparatively humble objects as our bowls, the lettering of which at an equal date might show less change. The Cadmus and Scylla bowls have very few uncials, they do not even use the rounded ϵ. In the St. Thomas bowls, on the other hand, ϵ is frequent, and ϙ and ʜ occur in uncial form. The ϙ, with other uncials, is found upon the bowl in the museum at Weimar, known as the Cappenberg bowl from the fact that it was given by Frederic Barbarossa to Count Otto of Cappenberg, who acted as godfather at his baptism.[3] In the interior of this bowl, which is of silver, is engraved a baptismal scene, in a style which must be later than the date on which Frederic was baptized, with an accompanying legend describing Count Otto as the donor's *patrinus.*[4] The apparent discrepancy between the style of the engraved subject and the supposed date of the gift is explained by the hypothesis that the object was originally given as a plain bowl, and that when, shortly before his death in 1171, Count Otto presented it to the monastery of Cappenberg, he caused the memorable

[1] The baptismal scene in the Cappenberg bowl shows immersion of this kind, as does the scene on one side of the portable altar by Roger of Helmershausen, dated 1118 (Falke and Frauberger, as above, pl. xii). For examples in MSS. see Swarzenski, *Salzburger Malerei*, pl. xlix, figs. 150, 151, reproducing miniatures in the Erlangen, or Gumpert, Bible. Cf. É. Mâle, *L'Art religieux du XIIe siècle en France*, p. 125.

[2] The use of capitals and uncials together began in MSS. as early as Carolingian times.

[3] M. Rosenberg in *Zeitschrift für christliche Kunst*, 1890, pp. 366 ff.; A. Kisa, as above, p. 373; O. von Falke in Lehnert's *Illustrierte Kunstgeschichte*, i, p. 278. The bowl remained in the monastery of Cappenberg until its dissolution in 1803, when, after changing hands more than once, it was purchased by the Grand Duchess of Saxe-Weimar on the advice of no less a person than Goethe.

[4] The legend runs:

    CESAR ET AVGVSTVS HEC OTTONI FREDERICVS
    MVNERA PATRINO CONTVLIT ILLE D(E)O.

(Rosenberg, as above, p. 367).

scene of the baptism with its descriptive legend to be added. There is enough conjecture in all this to reduce the value of the Cappenberg bowl as an aid in dating other examples; but assuming the fact that it was presented by Count Otto to the monastery at some time before 1171, we have a *terminus ad quem* for an example in which the style is relatively advanced, and has been compared to that on the crown-light at Aix-la-Chapelle. If such work was produced before the last quarter of the century,[1] an earlier date for the mass of the bronze bowls is certainly probable.

The absence of satisfactory illustrations adds greatly to the difficulty of grouping these bowls according to their style; they are not easy to photograph and troublesome to draw, with the result that, even of important examples, adequate reproductions are lacking. As good illustrations multiply, classification should make more rapid advance, and many more relationships should be established. Even now, thanks to the careful reproduction of the Achilles bowl in the *Gazette archéologique*, it is possible to bring the bowls from the Severn into relation with that interesting example,[2] while the photographs, and drawings from photographs, illustrating this paper show the affinities between the several bowls with the legend of St. Thomas. Again, groups may be established within the large class engraved with the Virtues and Vices.

The comparative material is fortunately supplemented in some degree by engraved metal-work on objects of different character and use which have been more freely illustrated, notably on the series of Rhenish portable altars dating from the close of the eleventh century onwards. The fine early example in the Martin Le Roy collection[3] shows that an accomplished engraved art was already in existence about the year 1100, and we have a whole series of portable altars dating from the twelfth century, including two by Roger of Helmershausen (p. 152, n. 1), which illustrate its progress to such admirable work as that of Wibert's crown-light at Aix (p. 154).[4] When we examine these remarkable achievements, we find less difficulty in believing that the St. Thomas bowls may themselves be earlier than the second half of the twelfth century, to which at first sight we might be disposed to assign them, and that the contrast between their fluent

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[1] The accepted date is about 1166.

[2] Possibly the Myrrha bowl at Frankfort (p. 145) and the Samson bowl at Cologne (p. 149) may come from the same place of origin; without careful reproductions it is impossible to make comparisons.

[3] *Collection Martin Le Roy*, vol. i, by J. J. Marquet de Vasselot, no. 1, pl. i; the altar came from Ipplendorf.

[4] These twelfth-century portable altars are reproduced in the plates of von Falke and Frauberger's *Deutsche Schmelzarbeiten des Mittelalters*, 1904, pls. x–xiv, xxvii, xxviii, xxxi, lxxvii, etc. As noticed above (p. 153, n. 2), the enamels associated with the engraved work themselves offer comparative material, since they are reserved in the metal and their interior lines are engraved.

style and the rude manner of the Severn bowls may be due less to separation in time than to production under different local influences.[1] It is to the region of the lower Rhine and the Meuse that such evidence as we now have seems to point as the chief home of this engraved work on metal. This was an area rich in monasteries in which all the arts were practised; it produced a series of great craftsmen, an Eilbert, a Frederic, a Godefroid de Claire, a Wibert, a Nicholas of Verdun, to whom we owe the astonishing enamels and metal sculpture now well known to students through illustrated publications.[2] The master craftsmen were at first monastic, working within their own monasteries; in time laymen entered the field, and gathering pupils about them, formed schools, often moving from city to city executing orders indifferently at home or abroad. But it was some time before the laymen lost touch with the monasteries; and sometimes, like Nicholas of Verdun in St. Pantaleon at Cologne, they took up permanent appointments in their walls, helping or directing the monastic workshop. Thus we find monastic and lay craftsmen in closest association, and the old custom of receiving the subjects and their descriptions from the more learned members of the religious houses still survived. We have already noticed that this region had a name for erudition (above, p. 147); and there is certainly an erudite character about the industrial art produced within its limits. The enamels of the Meuse and Rhine have long been contrasted with those of Limoges for their free employment of descriptive legends; their elaborate arrangement of biblical subjects by type and antitype, shows that directing minds, well versed in sacred lore, were always behind the craftsman, who carefully followed the prescribed design.[3] The portable altars, crosses, and other works of art in metal share this quality, with the rarer works bearing secular subjects. The existence of distinct centres working in metal in the region of the Meuse and Lower Rhine, and the migratory habits of many leading craftsmen, may sufficiently explain the great difference of style between the different groups. One monastery or town had better men than another; one clung more to old models and traditions, while another was more ready to adopt new ones; one had a genius for its master, another a mediocrity. It was as early as about 1100 that Roger of Helmershausen wrote,

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[1] Though it is conceivable that such bowls might have been made in Palestine under the kingdom of Jerusalem, it is more likely that they were importations from Europe, like the objects with which they are said to have been found.

[2] These men and their pupils worked in various cities: Verdun, Dinant, Namur, Huy, Liège, Aix-la-Chapelle, Cologne; any or all of these towns might well have produced such objects as engraved bowls.

[3] In his recent work, *L'Art religieux du XII* siècle en France*, 1922, M. Émile Mâle brings out a probable initiative of Suger in such a direction through the connexion of masters like Godefroid de Claire with St. Denis (p. 138).

under his monastic name of Theophilus, a treatise upon the arts and crafts of his time the scope and thoroughness of which prove that, except in the use of mechanical appliances, the monastic craftsmen of his day would have little to learn from us; the activity of Nicholas of Verdun extends beyond the closing years of the century. In the industrial arts, as in others, the age cannot but excite our profound admiration. Molinier, an acute judge, in his book on medieval artistic metal-work, entitled the chapter dealing with this period 'The great century of the Middle Ages'.[1]

The conditions under which bowls have been actually found have not, so far as I am aware, helped to determine the place of manufacture; none seems to have been discovered on the site of workshops. Some have been found in or under old buildings, but this proves nothing in the case of objects of so portable a nature. The provenance of more than one example is given as Aix-la-Chapelle; one of these, engraved with two knights fighting, is still in that city;[2] another, with the story of St. Ursula, is at Cologne.[3] In the twelfth century both Aix and Cologne had a developed metal industry in connexion with the manufacture of works of art; but other cities in other regions perhaps enjoyed equal advantages. The nature of the alloys might be of some service if analyses had been made on an extensive scale; but in fact few examples have been analysed.[4] It is perhaps a point of some interest that in East Prussia, a district in which, as already mentioned, a large number of engraved bowls, chiefly with Virtues and Vices, have been found, one settlement, Guben, had been colonized from the Lower Rhine; a religious house in another place, Zottenburg, was founded from Arrouaise in Flanders.[5] But perhaps the activities of the Hansa merchants had most to do with the wide diffusion.[6]

Although the region above suggested may have been the main seat of

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[1] *Histoire des arts industriels: L'Orfèvrerie religieuse et civile*, ch. v. M. Molinier saw an affinity between the well-known crozier-head in the Bargello at Florence, signed by *Frater Willelmus*, and the engraved bowls. The crozier is ascribed to the North-East of France, where there was a penetration of German and Flemish influence. Like a contemporary casket in the Cathedral of Troyes, the crozier bears the Virtues and Vices (Molinier, as above, p. 171).

[2] Kisa, as above, p. 368. The district of Aix is said to possess ores suitable for making bronze alloys (*ibid.*, p. 470).

[3] *Ibid.*, p. 366. We have seen that the Cappenberg bowl has been conjecturally attributed to Cologne.

[4] The bowl with the story of Myrrha at Frankfort is stated to contain twenty per cent. of zinc, and consequently to be made of brass (*Zeitschrift für christliche Kunst*, x, p. 250; Kisa, *ibid.*, xviii, p. 368).

[5] Kisa, as above, pp. 295, 297.

[6] Cf. J. Leisching, *Jahresbericht des Kunstgewerbemuseums der Stadt Cöln*, xxi, 1912, p. 16. The bowls with Virtues and Vices seem to form the latest group, examples of which were still made in the thirteenth century.

manufacture, it need not be supposed that in an age so cosmopolitan as that of Romanesque art nothing was done beyond its borders. There must have been similar activity elsewhere, and in discussing possible centres of production, England should not be wholly left out of sight. The discovery of the bowls forming the subject of this paper in English rivers counts in itself for little, since portable objects travelled from country to country. But there are circumstances which give some weight to an English claim. There is, for example, the existence of such an object as the Gloucester candlestick, in itself sufficient evidence that high technical skill and creative power were present in English workshops.[1] There is the undisputed pre-eminence of English *scriptoria* in the production of illuminated manuscripts right down to the thirteenth century, and there is the excellence of the seal-matrices made in England. There is the further fact, noted above, that in the study of classical mythology and in its moralization monks of English birth possessed a recognized initiative and authority; the case of John of Salisbury will be remembered. The learning, no less than the skilled handicraft, was available on this side of the Channel. Such facts must not be forgotten when a really comprehensive study of these engraved bowls comes to be made.

We come now to the last question: the method by which the subjects and the ornament on these bowls were executed. The general view, expressed indeed in the very term 'engraved bowls', has always been that the work was done with metal tools. But recently Mr. C. Praetorius, F.S.A., who has a practical knowledge of working in metals, has expressed the opinion that the lines are not engraved but bitten. He states that to him they do not present the character of engraved lines, but have on the contrary the appearance of being produced by the action of acid. This acid, he thinks, may have been a fruit acid, such as white wine vinegar, with added salt; but the men who could gild copper and bronze so skilfully as the craftsmen of the twelfth century, must have been acquainted with sulphuric acid, by whatever name they may have called it; and nitric acid may have been known earlier than is commonly supposed. The acceptance of his view need by no means impugn the genuineness of the bowls, of which he is personally convinced.[2]

This opinion is not shared by others with a long familiarity with medieval examples of the metal-worker's craft, and the point, having once been raised, should be further investigated. The confirmation of so revolutionary a theory would affect not the bowls alone but many other examples of medieval engraving,

[1] Mr. Mitchell has usefully reminded us of this in connexion with the remarkable ivory recently discovered at St. Albans and now in the British Museum (*Burlington Magazine*, October, 1922, p. 176).

[2] It may be observed that the lines upon the St. Thomas bowl, when examined under a powerful microscope, showed the same characteristics as those upon the bowls from the Severn.

for the same kind of line is found upon other classes of metal objects. To decide the question with finality would require a scientific examination of all these classes, and might be supplemented by research among early manuscripts dealing with chemistry, for mention of the use of acids. The difficulties raised by Mr. Praetorius's hypothesis might naturally tend to revive the view expressed by certain persons in 1824, that the Cadmus and Scylla bowls are ingenious forgeries. The opponent will say that if acids were commonly used for biting the lines in metal during the Romanesque period, Theophilus in his *Diversarum artium Schedula* [1] would have given a full description of the process. He will ask for documentary evidence to show that fruit or other acids were actually employed. We must leave at this point a problem which should receive the attention of those competent to deal with it, merely expressing the opinion that whatever the process, these bowls are the genuine work of the twelfth century. [2]

The objections raised on less tangible grounds by those not familiar with the illuminations, the ivory carvings and other works of art produced in the middle ages carry little weight. The apparent oddness of various details in the bowls from the Severn is not a serious argument, and we have already seen that for most of these details parallels can be found on works of art of which the authenticity is not questioned. The condemnation of the unfamiliar is a method which is least approved by those who have toiled farthest along the paths and bypaths of medieval research; not unnatural in 1824, it is behind the times in which we live to-day, with their infinitely wider field of comparison. If the Cadmus and Scylla bowls are false, they must either have been inventions or reproductions. On the former supposition we have to conceive the existence in 1824, when Romanesque art was hardly distinguished from Roman, of a specialist so versed both in the literature and the art of the Romanesque period as to produce, for his gain [3] or his diversion, whole sequences of figure subjects accompanied by metrical descriptive legends, and all so consistently in accord with medieval feeling and tradition that we, with the critical apparatus of modern times, are unable to detect any fatal blunder. We have to suppose either that

[1] Written at Paderborn in Germany about A. D. 1100 by a monk whose real name was probably Roger of Helmershausen, himself a great worker in metal, cf. above, p. 156. It may be admitted that the absence of such mention is an important point.

[2] The fact that the St. Ursula bowl in the Suermondt Museum at Aix-la-Chapelle has been reproduced in several examples in the nineteenth century (S. Beissel, *Gefälschte Kunstwerke*, p. 86, 1909), does not in any way weaken this conviction. In the case of the St. Ursula bowl, we have exact imitations of a known original.

[3] We have already seen that both bowls were locally sold to persons not in affluent circumstances ; it was not until years after the discovery that they were acquired by well-to-do purchasers. A specialist of such enterprise as the hypothesis of falsification demands would have managed his business affairs with more astuteness.

this pioneer in medieval scholarship was himself a craftsman, or that he employed a workman able forthwith to identify himself with the medieval spirit. So many improbabilities are here piled one on the other, that we need hardly pursue the first supposition farther, but may pass at once to the second: that the bowls merely copy originals. We may almost dispose of it by a simple question: where are the originals? It would be a somewhat remarkable thing if works of art, regarded in 1824 as of sufficient interest to inspire all this imitative labour, should have totally disappeared, while the reproductions alone survived; so remarkable, that plain minds may find it simpler to accept the facts of discovery as related.

This account of the engraved bronze bowls in the British Museum leaves unsolved essential problems connected with the large class of medieval bowls to which they belong. It has been written with a purpose less ambitious than that of reaching final conclusions. It is intended to make the Museum examples serviceable for the further comparative study which alone can decide the questions raised, and incidentally to bring into greater prominence objects in their present state [1] inconspicuous, and giving little idea of their exceptional interest for medieval studies. The problem as a whole remains imperfectly defined. Groups and single examples have still to be traced to certain places of manufacture; their date has yet to be determined with precision. In the above pages much is conjectural and subject to revision in the light of further knowledge. It has been merely suggested that, wherever made, the objects here particularly discussed saw the light in the first half of the twelfth century, or, at latest, not long after the year 1150, and the suggestion itself owes such force as it may possess to its general agreement with the conclusions of other writers.

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[1] The bowls are thought by some to have been gilded, and some have supposed that the engraved lines may have been filled with a dark substance, so as to stand out effectively against the gilded ground.

IX.—*A Find of Ibero-Roman Silver at Cordova.*
By W. L. HILDBURGH, *Esq., F.S.A.*

Read 16th March 1922.

IN spite of the long history of silver in Spain,[1] and the vast amount of that metal taken from her mines in ancient times, comparatively few objects made in the Peninsula before the Christian era are to be seen in museums or in private collections. The things not protected and concealed by earth, with possibly a few exceptions, long ago went the way of all articles of precious metal in a theatre of repeated warfare; and most of those discovered accidentally in the soil were until quite recently melted down for the metal they contained. The pieces with which the present paper deals have, in addition to their general interest, the special value due to their having been kept together ever since they were found, and to their being accompanied by a quantity of coins found with them which give us, with close approximation, the date at which they must have been buried.

In February 1916 the late Mr. Horace Sandars showed before the Society a collection of Ibero-Roman silver jewellery, found in 1914 in the province of Jaén, Spain.[2] Shortly after this he presented the collection, known as the 'Treasure of Mogón', to the Madrid National Archaeological Museum,[3] where it has for some years been exhibited. The hoard of Ibero-Roman objects I am about to describe is curiously similar in character to the Mogón treasure, and was doubtless buried in much the same circumstances.

The present hoard was found, in January 1915, on the outskirts of Cordova, in a plot of ground belonging to D. Francisco Cabrera, a well-known archaeologist and a member of the local antiquarian society, from whom I obtained, in June 1916, some details of the discovery. The fortunate cir-

[1] Cf. W. Gowland, 'Silver in Roman and Earlier Times,' in *Archaeologia*, lxix, pp. 130 *seqq.*; Leonard Williams, *Arts and Crafts of Older Spain*, Lond., 1907, vol. i, pp. 1–14.

[2] Cf. *Proceedings*, xxviii, pp. 56 *seqq.*

[3] J. R. Mélida, *Museo Arqueológico Nacional: Adquisiciones en 1916*, Madrid, 1917, pp. 4 *seqq.*

cumstance that Señor Cabrera was himself interested in archaeological matters ensured that all the objects found were, with the exception of a few of the coins, kept together. The discovery was made during the digging of a hole intended to contain a large oil-vessel for the use of the Molino de Marrubial, opposite to the cavalry barracks of the same name. The site is that of a Roman cemetery in which many wealthy people were buried. It seems to have received inter- ments until a period considerably later than that to which the burial of the present hoard may reasonably be assigned. This cemetery appears, according to Señor Cabrera, to have been located on both sides of a Roman road running to Cástulo.[1]

The hoard was found in the earth without covering of any kind, differing in this respect from the Mogón treasure, which was contained in an earthenware vessel, with the exception of three silver torcs round the vessel's neck.[2] The silver bowl of the present find contained, according to Señor Cabrera, only the coins and two lumps of silver (fig. 14 and the wedge-shaped piece), the other articles lying outside of it. This circumstance, the nature of the objects composing the hoard, the bent or broken condition of many of the pieces when they were buried, and the little-worn condition of most of the coins[3] (a silversmith selecting coins for melting would, presumably, choose those from which he could get most material), naturally suggest that we have here to do with the raw materials and perhaps part of the stock of some working silversmith, hurriedly buried, and never recovered.

An examination of the coins[4] has indicated that, if the chronology at present generally accepted is to be followed, we should believe that the treasure was buried a little after B.C. 90, because, while it contains 47 denarii made (according to that chronology) during the period B.C. 102-90, there are no coins of later date excepting the few noted on p. 182, *infra*, which seem obviously to be intruders. Mr. H. Mattingly, of the British Museum, has, however, suggested, in con- cluding his note quoted in part on pp. 183-4, *infra*, that 'the numismatic evidence is strongly in favour of a date earlier than *c*. B.C. 101' for the burials of a certain group of finds of which the present hoard seems obviously to be a member. He adds: 'The historical occasion is not far to seek. The Northern invaders, after their great victories over Rome in Gaul in B.C. 105, turned south to attack Spain and did not return till late in B.C. 103. This brief but violent invasion, which seems to have encountered a desperate resistance, provides just the suitable conditions for the hoarding of coins. In the years B.C. 91-89 no events at all

[1] Cf. Sandars, 'The Linares Bas-Relief and Roman Mining Operations in Baetica,' in *Archaeo- logia*, lix, pp. 316 *seqq*.

[2] *Proceedings, loc. cit.*, p. 57.   [3] Cf. p. 182, *infra*.

[4] Cf. *infra*, p. 182.

likely to occasion it took place in Spain.'[1] In addition to some other hoards of coins, the group of finds in question includes the Mogón treasure (hitherto thought to have been buried about B.C. 89–80),[2] and another treasure, found in Jaén province in 1911, containing coins, a silver armlet, and portions of a silver torc and of other jewellery, whose burial has hitherto been assigned to about B.C. 90–85.[3]

The present find included, in addition to the bowl, the coins, and the rough lumps above mentioned, a fragment of a second vessel and a number of interesting personal ornaments of several kinds, some bent out of shape, some with small parts missing. The action of the soil upon the silver, while leaving the metal seemingly unaffected, has unfortunately rendered a number of the objects so brittle that even fairly stout pieces can easily be broken. Because of their brittleness, some of the things have been broken or chipped either by the pressure of the soil upon them or through the handling which they have suffered during exhumation or since, while cracks are observable in a number of others. Their fragility has, however, been advantageous in that it has served to fix for us approximately the shapes which they had when found, shapes which in some cases at least must have been produced by intentional distortion before the burial of the silver.

The silver of the find has been called broadly Ibero-Roman, because of the place at which and the period during which it was buried, although amongst the coins above eighty are Celtiberian issues, and there are pieces of the silverwork which, so far as we are at present able to judge, might very well have been made in pre-Roman times. If the bowl, the jewellery, and the fragments are—as they seem to me—a portion of a silversmith's stock at least in part destined for refashioning, we are obviously not entitled to rely much upon them, unless supported by outside data, as evidence concerning the fashions of the district where they were found or as to the date at which they were buried, because, except for silver things rendered useless by breakage, it is the pieces out of fashion which are most likely to go to the melting-pot. In the present case there are several objects—the bowl, and the armlets or torcs made of twisted strands, for example—which appear certainly to be of the district, but there are others which, for all we now know to the contrary, may have been brought there, perhaps even in their present fragmentary state. The differences of design and in technique observable amongst the personal ornaments, and some resemblances—which I am inclined to regard as not very deep and as in

[1] Cf., however, G. F. Hill and H. W. Sandars, 'Notes on a find of Roman Republican Silver Coins and of Ornaments from the Centenillo Mine, Sierra Morena' in *Numismatic Chronicle*, 4th Ser., xii (1912), p. 69.

[2] Sandars, *op. cit.*, p. 62.   [3] Hill and Sandars, *op. cit.*, pp. 65 *seqq.*

all probability almost or entirely fortuitous—between several of those ornaments and certain later jewellery found outside the Peninsula, have led to suggestions that the original inhumation, or perhaps a reburial of a part with additions, of the treasure occurred during the present era, in the second century or later. There is, I think, no good basis for such suggestions. With the few 'intruder' coins, which have been cited in support of these suggestions, and which accompany the many others whose proper inclusion has not been questioned, I shall deal later (cf. *infra*, pp. 182-3). The other principal reason for these suggestions has been a certain resemblance between the animal-headed armlets shown in figs. 5 and 6 and some armlets attributed to the second century A.D., and others of even later date. This resemblance seems to me to be due to nothing more than the adaptation at different periods to flat bands of the animal-heads often used, as ends for the armlets of circular section, both by peoples who had trading relations with the pre-Roman population of the Peninsula and by those of a later time. As animal-headed flat-sectioned armlets, recorded in accounts of other finds in Spain, have been assigned for what appear good reasons to a period more than a century earlier than that claimed for the burial of the present find, I think it hardly necessary to suspect the armlets reproduced in figs. 5 and 6 of being later than about B.C. 100. The objects illustrated in figs. 3 and 4, furthermore, are in complete agreement with the date claimed here; we find (cf. *infra*, p. 170) similar, sometimes almost identical, things accompanied by coins indicating that they were buried precisely at the period in question.

Detailed examination has revealed in several instances what seem to be unquestionable traces of the strong Greek influences which have so often been pointed out in various branches of Iberian art. The influences here exhibited seem to be those of Greece of perhaps the fifth to the second century B.C.; in a few instances the objects display characteristics which seem to indicate either earlier Aegean or Celtic affinities rather than classical Greek.[1] Unquestionable Greek influences are evident in two pieces of the Mogón treasure (cf. *infra*, p. 173); two silver objects (parts of a wreath and a necklace), found in the province of Valencia, in the British Museum, have been called 'Late Greek or perhaps of the Graeco-Roman period';[2] and the remarkable gold diadem found at Jávea, in the province of Alicante, in 1904,[3] and now in the Madrid Museo

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[1] Cf. J. Pijoan, 'Iberian Sculpture,' in *Burlington Mag.*, vol. xxii (1912), pp. 65 *seqq.*, for remarks on affinities of this kind.

[2] Cf. *Cat. Jewellery* (*Greek, Etruscan, and Roman*), *Brit. Mus.*, 1911, nos. 1633, 1950.

[3] Cf. Mélida, 'El tesoro ibérico de Jávea,' in *Revista de Archivos*, vol. xiii (1905), pp. 366 *seqq.*; and P. Paris, 'Le trésor de Jávea,' *Revue archéologique*, vol. viii (1906), pp. 424 *seqq.* The former paper is in part reproduced by F. Almarche Vásquez, *La antigua civilización ibérica*, Valencia, 1918, pp. 118 *seqq.*

Arqueológico, has been classified by so able a student as M. Paris as 'Greek, perhaps even Attic, imported into Spain as other Greek things were imported into Etruria or the Bosphorus districts'.[1]   Other finds of silver jewellery precisely like some of the present examples, have indicated that at least some of the types in which Greek influences are prominent were in common use in a district about the upper Baetis (the Guadalquivir of to-day) which probably extended down-stream to, and perhaps beyond, Cordova.[2]   The Phoenicians, and later the Carthaginians, settled in the valley of the Baetis, and at least the latter seem to have worked the silver mines,[3] well up the river and in the district whence have come various pieces of jewellery (cf. *infra*, in connexion with fig. 3) showing marked Greek influence.   The Greek settlements were along the eastern coast of the Peninsula, and mostly well to the north of the district in which the present pieces of jewellery and others clearly related to them were found.   Did the models upon which the Greek-influenced examples amongst these pieces were based come to the district in question by passing through Carthaginian settlements and then up the Baetis in the ordinary course of trade; or did they reach the district in some other way or by some other route?   We have learned that 'it is historically probable that the Greeks took advantage of Tyrian troubles when Tyre was destroyed in about 585 B.C. to push south as far as Malaga, and that they temporarily founded a settlement (Maenaca) in that neighbourhood. It is also probable that the Carthaginians, after they had inflicted a severe blow upon Greek prestige ... in 535 B.C., occupied the eastern coast of Iberia'.[4]   Thus it seems by no means unlikely that the styles appearing in the examples cited were introduced by Greek workmen settled in or near the actual district in question, and that Greek styles continued to be followed by the descendants of such workmen or by silversmiths imbued with their traditions, with perhaps an occasional infusion of fresh inspiration derived from a piece newly-brought from a Greek workshop outside of the Peninsula.   The penetration of Greek styles to the settlements on the upper Baetis might, I think, easily have taken place without their passing up the river; many things showing strong Greek influences

[1] Cf. *loc. cit.*, p. 433.   Mélida's view (cf. *loc. cit.*, pp. 372 *seq.*) is that the diadem is of native workmanship.   Paris suggests (*loc. cit.*) further that it is highly probable that jewellery was made in Greece of the fifth and fourth centuries especially for such foreign markets as those of the Peninsula. P. Baur takes it to be 'more probably the work of an Ionian of Asia Minor, who very successfully combined Attic delicacy with Ionic sumptuousness'; cf. 'Pre-Roman Antiquities of Spain', in *Amer. Jour. Archaeology*, 2 S., vol. xi (1907), pp. 192 *seq.*

[2] Cf. *infra*, p. 170 (text and foot-note 2).

[3] Cf. 'The Linares Bas-Relief ...', pp. 312 *seq.*

[4] Cf. Sandars, 'Pre-Roman Bronze Votive Offerings from Despeñaperros,' in *Archaeologia*, lx, p. 72.   Cf. *ibid*, p. 71, or Sandars, 'The Weapons of the Iberians,' in *Archaeologia*, lxiv, p. 210, for map showing distribution of Greek and Carthaginian settlements in Spain.

have been found in places along the Alicante coast, and from that coast a valley route seems open almost to the headwaters of the Baetis.

The list given below includes, according to Señor Cabrera, everything found :

Fig. 1. A conical bowl, rounded at the bottom, whose exterior is smooth throughout;[1] its rim, thickened, is moulded on the inner surface. Diam. at top, about 5·4 in.; height, 3·3 in.; weight (including detached fragments), about 7·5 oz. troy. A pick made a hole in one side when the hoard was discovered, and

Fig. 1. Conical silver bowl.

the bowl's brittleness has resulted in the metal breaking away in a number of fragments (which have been preserved) and in the appearance of several cracks about the aperture. When found, the coins, the large lump, and the wedge-shaped lump were contained in this bowl.

Riaño refers[2] to a conical silver bowl, which 'is perfectly plain, and has an Iberian inscription engraved on one of its sides'; he mentions,[3] also, another 'silver bowl of a similar kind, which was found in Andalusia in 1618 full of Iberian coins: this bowl weighed ten ounces'. Several silver bowls, very similar in form to the present one and not differing widely from it in size, are in the Museo Arqueológico Nacional at Madrid. Of these, some have lines of

[1] Earthenware cups of similar forms have been found in Spain. For some examples see H. and L. Siret, *Les premiers âges du métal dans le Sud-Est de l'Espagne*, Antwerp, 1887, pls. 55 (El Argar), 65 and 68 (Fuente Alamo).

[2] *The Industrial Arts in Spain*, p. 1.

[3] *Loc. cit.*, quoting Velasquez's *Ensayo sobre las letras desconocidas*, Madrid, 1752.

punched ornamentation round the rim; one, with a moulded rim much like the present example, has its inner side inlaid, some way from the edge and flush with the surface, with a golden cross having short limbs of equal length.[1] Some other silver bowls there, of various sizes approaching that of the present one, are somewhat less conical and more rounded than it is in vertical section. Several of the Museum's silver bowls came from near Santisteban del Puerto in Jaén province, having formed part of a considerable silver treasure found by chance and presumably in part dispersed before the Museum was offered what it has.[2]

Fig. 2. A fragment of the upper part of a vessel of thin metal, whose thickened rim was ornamented with a double line of

Fig. 2. Fragment of a silver vessel.

punched dots. Weight, about 0·35 oz. (not including several small pieces, broken off, but still preserved). The dotted ornamentation here is somewhat like the ornamentation of the rims of some of the Madrid Museum's conical bowls,[3] although not so carefully executed. I am inclined to think that the present vessel had, like certain pottery vessels (e. g. the olla in which part of the Mogón treasure was found),[4] a more or less globular body and a shortish neck.

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[1] Sentenach doubts if the bowl was originally thus ornamented; cf. 'Bosquejo histórico sobre la orfebreria española', in *Revista de Archivos*, vol. xviii (1908), p. 102. I do not know what reason there is, unless it be the Christian form of the emblem, for this doubt; we may see a similar cross, painted, in a corresponding position (but on the outside) on a pottery vessel found at Luzaga, and thought to have been made under Celtic influences (cf. Bosch Gimpera, *El problema de la cerámica ibérica*, Madrid, 1915, pp. 33 *seq.*). Cruciform designs occur—perhaps brought about merely through the desire to fill circular spaces—on the small flat bottoms of pottery conical cups painted with designs resembling those found on some Aegean pottery (cf. *ibid.*, pl. viii and pp. 27, 45). If the golden cross is, as I take it to be, contemporary in period with the bowl, I think that, like certain details of the present silverwork and like certain pottery objects (cf. *Man*, 1922, 52), it may (since in form it corresponds exactly to certain Aegean examples) possibly be one of the numerous indications of the contact between the Peninsula and an Aegean civilization of a period much earlier than the one to which these Iberian bowls are assignable. On crosses in Minoan art cf. Evans, *The Palace of Minos at Knossos*, vol. i, Lond., 1921, pp. 513 *seqq.*; on crosses as Aegean motives in Peninsular art, cf. P. Paris, *Essai sur l'art et l'industrie de l'Espagne primitive*, vol. i (Paris, 1903), p. 34, and figs. 26, 27. Possibly of further interest in this connexion is a pottery plate or bowl, found by Schliemann in the ruins of the 'Fourth City' on the site of Troy, which has a large cross in its hollow, 'evidently painted there before the plate was baked' (cf. H. Schliemann, *Ilios*, Lond., 1880, p. 544, fig. 1128).

[2] Mélida, *Mus. Arqueol. Nac.: Adquisiciones en 1917*, Madrid, 1918, pp. 11 *seqq.* and pl. v.

[3] Cf. *ibid.*, p. 12.   [4] Cf. Sandars, *Proceedings*, xxviii, fig. 2.

Fig. 3. A large armlet or a torc[1] (coiled to make it occupy little space), approximately 22·25 in. between extremities, making at present nearly two complete turns. Diam. of opening (taken about half-way between the extremities, and measured between the innermost points of the strands), about 3·5 in. Diam.

Fig. 3.   Silver armlet or torc.

of section at thickest part (i.e. about half-way between extremities), about 0·48 in. Weight (including parts broken off, but not including the coins or the piece of chain), about 6·85 oz. The careful way in which the circular form has been preserved during the reduction of the circumference suggests the possibility that,

[1] Mélida's observation (on p. 169 of 'Antigüedades anteromanas de la costa de Levante', in *Rev. de Archivos*, vol. vii [1902]) is perhaps worth recalling here, that amongst Spanish torcs those of gold, but of the rougher workmanship, are generally found in the north-western part of the Peninsula and adjacent districts, while those of silver, formed of wires twisted spirally or of little chains, are found more commonly toward the south.

even if the object was (as is indicated by the Mogón pieces and others) intended originally for use as a torc, it was later adapted to be worn as an armlet, although rather larger than most; the addition of pendent coins would have fitted in with such an adaptation. Perhaps further evidence as to the object's employment is that it forms a pair with the object illustrated in fig. 4, and that the hoard contains two other pairs of ornaments, in both cases armlets. The object has been formed of three thick strands (whose maximum diameter is about 0·2 in.; they taper from the middle towards either end) and three pieces of sharply-twisted square-sectioned wire (much of which has disappeared), skilfully twisted together, all six parts meeting at either end in a single solid tapering portion ending in an eyelet. The two pierced silver coins (Roman denarii: B.C. 217–197, symbol a wheel; and *c.* B.C. 172–151, 'C. ATESTI') and the small piece of chain figured in connexion with the object were, I was told, attached to the eyelets [1] when found. The brittleness of the silver has led to a number of minor breakages, to the cracking in several places of the component strands, and to the loss of some parts of the twisted square wires.[2] A third pierced coin, accompanying the hoard, had not, I was told upon inquiring, been associated with any of the personal ornaments; subsequent examination having shown this coin to be one of the 'intruders', the matter appears worth mentioning as a minor piece of evidence, negative though it be, in favour of the view that the presumed 'intruders' were not buried with the silverwork.

Three silver torcs, each formed of several strands joining at either end in a solid tang, and almost identical in general appearance with the present object, were included in the Mogón treasure. A break in one of these (cf. Sandars, *Proceedings,* xxviii, p. 57 and fig. 4) has disclosed the manner of its construction, and has shown that the three principal strands were made from bands whose edges were joined together, so as to form tubes, during the manufacture of the torc; the two others (*ibid., loc. cit.* and fig. 3) may have been produced in the same way. The present object, however, seems to have been made with solid pieces and not with tubing, if we are able to judge truthfully by the look of the strands in places whence chips have become detached. A silver ornament, in the Madrid Museum, formed similarly of twisted strands worked into one at either end and terminating in eyelets, has been figured by M. Paris;[3] two others there,[4] also made of twisted strands, have at the thickest (the central) part, the one a knot, the other an 8, formed of the strands. We may observe, in passing,

[1] Eyelets of this kind appear to have served in torcs to hold a cord to fasten the ends together; cf. Sandars, *Proceedings,* xxviii, p. 57.

[2] A torc, of a type other than the present one, formed of square wires, is figured by Mélida, 'Antigüedades anteromanas . . .', pl. v (with description on p. 169).

[3] Cf. *Essai,* vol. ii (1904), pl. vii, fig. 5.   [4] *Ibid.,* figs. 1, 2.

that all these three were said (cf. *ibid.*, p. 246) to have been found at Menjibar,[1] which is near Jaén and not very far from Cordova.

Now, it seems clear from the number of ornaments—whether torcs or armlets—of this kind of work which have been recorded, that we have here to do with a definite type. It is therefore worthy of observation that, whether by accident of discovery, of preservation, or of publication, or because the type in question was limited to a particular district,[2] all the examples (including the present ones) to which I have referred have been found in sites on or near the Guadalquivir. Furthermore, the coins of the Mogón find, and very probably those of the present find as well, indicate that the type was in use, in the district in question at least, at or until near the end of the second century B.C. Torcs of this type seem (it is, of course, not clear whether the fine strands are present or not) to be represented on some of the little Iberian or Ibero-Roman votive figures; e.g. on two figured by Sandars, one[3] from Santisteban del Puerto, in Jaén province, the other[4] from Despeñaperros.

Sentenach attributes[5] to the Roman period all the silver torcs of this type found in Spain, and in this differentiates them from torcs of non-twisted types, of which many examples made of gold have been found in Galicia and the neighbouring parts of the Peninsula,[6] basing his opinion on quotations from Roman authors and St. Isidorus' *Etimologia* (xix. 31, 11); Balsa de la Vega also believes the twisted type to have reached Spain in Roman times.[7] While I think that the particular examples of the type, including the present ones, that I have cited may indeed have been made during the Roman period in the Peninsula, I see no reason to suppose that necessarily the Romans had anything to do with the introduction of the peculiar construction employed; on the contrary, I am inclined to think that the particular Greek influences seemingly traceable in this kind of work might very well have arrived in the Peninsula before Roman customs or Roman taste could have affected the inhabitants. We are, perhaps, at the moment unable to decide whether the little bronzes to which I have just alluded were made before or during the Roman period,[8] but

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[1] Cf. large-scale map given by Sandars, 'The Linares Bas-Relief . . .', p. 312.

[2] It is, of course, on the present evidence open to question whether Cordova was included in that district, or was merely adjacent to it, for the present hoard possibly contains (as pointed out, *supra*, p. 163) things from various localities; and, furthermore, the coincidence of the dates of the burials of the Mogón and other treasures and the present one suggest the possibility that the latter belonged to a fugitive down the Guadalquivir valley.

[3] *Proceedings*, xxviii, fig. 11 and pp. 60 *seq.*

[4] 'Pre-Roman Bronze Votive Offerings,' pl. xii and p. 86.   [5] *Op. cit.*, pp. 103 *seq.*

[6] Cf. *ibid.*, pp. 98 *seqq.*, where several papers dealing with them are noted; Balsa de la Vega, in *Orfebrería gallega*, Madrid, 1912 (also in *Bol. Sociedad Española de Excursiones*, vol. xx [1912]), figures some Galician examples.

[7] Cf. *Orfebrería gallega*, p. 19.   [8] Cf. 'Pre-Roman Bronze Votive Offerings', p. 69.

we are entitled to believe that at least a great part of the statues found at the Cerro de los Santos and showing archaic and classical Greek elements[1] date from pre-Roman times, and in a number of these we find what seem to be representations of torcs[2] or of armlets[3] made of wires twisted together; the armlets, it appears, were worn by men, and on the upper arm.[4] The most salient feature in objects of the present type is their spiral construction with slender twisted strands paralleling stout smooth strands. This peculiar construction occurs (although there not accompanied by the present tapering towards either end) in various gold objects made by Greeks of about the fourth century B.C., or possibly a little later.[5] The fine armlet of the king, from Kul Oba, near Kerch,[6] and an armlet terminating in lions' heads,[7] another with twin-twists,[8] and the edgings of a remarkable neck-ornament,[9] all from the barrow called the Great Bliznitsa (whose approximate date is given by a gold stater of Alexander the Great found in it[10]), are formed thus of thick wires of circular section wormed with strands made each of fine wires of circular section twisted together. And a torc,[11] found at Olbia and now in the Hermitage Museum, is similarly made of stout wires of polygonal section together with thin strands formed each of one twisted wire of oblong (instead of square, as here) section. The same sort of construction appears in a gold armlet, of the period of La Tène I (fifth-fourth century B.C.),

[1] Cf. Paris, *op. cit.*, vol. i, p. 162.

[2] Cf., for examples, *ibid.*, figs. 146, 148, 151, 175; or Mélida, 'Las esculturas del Cerro de los Santos,' *Rev. de Archivos*, vol. xiii (1905), pl. i and p. 23, and vol. viii (1903), pl. v. We cannot, of course, tell from the sculptures, which for the most part are roughish, just what the construction of the torc-like objects was.

[3] Cf. Paris, *op. cit.*, figs. 138, 146; or Mélida, *op. cit.*, vol. ix (1903), pl. vi and p. 281, and vol. xiii, pl. i.

[4] It is perhaps worthy of note in connexion with the vexed question of the authenticity of certain of the Cerro de los Santos figures, that there is a difference of opinion between Paris and Mélida in the matter of the two statues cited as wearing armlets, the former expressing his opinion that his fig. 138 illustrates a false example and his fig. 146 a genuine one, while the latter remarks precisely the reverse in the matter of the two statues (cf. Paris, p. 170, and Mélida, vol. ix, p. 281; and Paris, p. 175, and Mélida, vol. xiii, p. 23). It is, of course, difficult to judge without having the statues in question before one, but I am inclined, on the evidence of the known silver objects—most of which have come to light since the doubtful figures were acquired by the Museo Arqueológico—showing the present kind of work, to think that both statues are ancient, although perhaps recut in some parts.

[5] Reproductions of three are in the Victoria and Albert Museum, nos. 1884—15, 16, 17.

[6] Cf. E. H. Minns, *Scythians and Greeks*, Cambridge, 1913, pp. 199, 202, 402; N. Kondakof, J. Tolstoï, and S. Reinach, *Antiquités de la Russie Méridionale*, Paris, 1891, fig. 83; V. and A. Mus., no. 1884—16.

[7] V. and A. Mus., no. 1884—17.

[8] Cf. *Ant. Rus. Mér.*, p. 65; Minns, *op. cit.*, fig. 317; *Comptes rendus de la Commission Impériale Archéologique* (St. Petersburg), 1865, pl. ii and p. 49.

[9] Cf. *ibid.*, 1869, pl. i; Minns, *op. cit.*, pp. 429, 400, 402; *Ant. Rus. Mér.*, pp. 62 *seqq.*

[10] Cf. *C. R. Comm. Imp. Arch.*, 1864, p. v.   [11] V. and A. Mus., no. 1884—15.

found at Wald-Algesheim, in which two thick wires and a thin beaded wire are twisted together spirally.[1] It is, perhaps, worth observing here that certain silver personal ornaments of Viking times, employing this kind of construction, have their slender strands formed each of thin circular-sectioned wires twisted together.[2]

A silver ornament formed like the present one but having a knot at its middle part, at Madrid, has been referred to above (p. 169). This knot seems

Fig. 4. Silver armlet or torc.

to me further evidence of strong Greek influence in connexion with the construction under discussion, for precisely the same kind of knot—the *nodus Herculeus*—appears frequently in Greek jewellery of the fourth, the third, and the second centuries B.C.[3] The Greek influences here involved seem, for more than one reason, to be classical. We may observe, for example, that filigree is rare in Mycenaean and the earliest Greek jewellery, and reaches its highest

[1] Cf. E. Aus'm Weerth, *Der Grabfund von Wald-Algesheim*, Bonn, 1870, pl. i and p. 15.

[2] Cf. J. J. A. Worsaae, *Nordiske Oldsager*, Copenhagen, 1859, figs. 455, 457; O. Montelius, *Antiquités suédoises*, Stockholm, 1873-5, fig. 608. Various other examples might also be cited.

[3] Cf. *Cat. Jewellery (Greek, Etruscan, and Roman)*, nos. 1607, 1608, 1609; and *ibid.*, index, *s. v.* 'Nodus Herculeus', for many minor examples; *Ant. Rus. Mér.*, pp. 57 *seq.*; Minns, *op. cit.*, pp. 432, 404 *seq.* Some jewellery of Roman times shows it as a minor element; cf. *Cat. Jewellery, cit.*, index. For the significance attached to this knot, cf. Daremberg et Saglio, *Dict. Antiquités, s. v.* 'Nodus'.

perfection in Greek jewellery of the fifth to the third centuries B. C.[1] We may note, too, as of some interest, that at least two pieces of the silver found at Mogón, accompanying torcs made like the present object, show strong classical Greek influence.[2]

Fig. 4. An armlet or a torc, similar to fig. 3, but shorter and coiled into smaller compass, about 19·5 in. from end to end. Diam. of opening, 3 in.; diam. of thickest part, 0·46 in.; maximum thickness of a strand, 0·2 in.; weight, about 6·05 oz. No pierced coins, or pieces of chain, seem to have been found with this.

Fig. 5. An armlet, formed of a flat strip with tapering ends shaped as the conventionalized heads of animals; it occupies, from end to end, a little more than a full circumference. Length of strip, about 10·9 in.; width at middle, 0·73 in.; approximate diam. of opening, 2·75 in.; weight, about 2·05 oz. It has obviously been intended for use as a pair with the armlet illustrated in fig. 6. Excepting the parts covered by the terminal heads, the outside of the strip is ornamented with four longitudinal bands in relief—a plain one along either edge, and a light corded one on either side of the longitudinal axis about half-way to the edge— and two sets of five small dot-and-circle mark-ings, one adjacent to either head, the circles of each set being interconnected by tangent lines crossing the longitudinal axis. The inner surface of the strip is without ornamentation.

Fig. 5. Silver armlet.

The terminals seem to represent heads of lions—their very distinct ears, and certain other features, seem clearly to show that they are not intended for serpents' heads—and to be a modification of the heads in the round (not infrequently those of lions) to be seen often on classical Greek jewellery as well as on the more easterly jewellery, of earlier times, with which it has affinities.[3] The lines of the heads are to me suggestive of a Greek original modified by an Iberian workman. Flat-sectioned armlets, very similar in form to the present one and sometimes terminating similarly in animals' heads, were in use among

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[1] Cf. *Cat. Jewellery, cit.,* p. lv.   [2] Cf. Sandars, *Proceedings,* xxviii, figs. 8, 12, and pp. 59, 61.
[3] For a note on ancient animal-headed jewellery see A. Odobesco, *Le trésor de Petrossa,* Paris, 1889–90, pp. 466 *seq.*

the Greeks;[1] of these some, it has been pointed out,[2] might have served as examples for the style which ruled amongst barbarous peoples of the second to the fifth centuries A.D. In Spain the flat-sectioned armlet seems to be attributable to about the same period as the ornaments made of a combination of thick and spirally twisted slender strands; this is indicated, quite apart from the present association of the two types in question, by the serpent-headed armlets (noted in connexion with fig. 8 *infra*) from the Cheste find. The ⊙⊸⊙⊸⊙ ornament here has perhaps, as it has elsewhere, been derived through the conventionalization of a running scroll. We may see a true scroll of the kind on the handle of an *espada falcata*[3] in the Archaeological Museum at Madrid; and it is therefore worth noting that the *espada falcata* was introduced into the Peninsula by the Greeks, and seems to have come into use there somewhere about the middle of the fourth century B.C.[4] The ornament in question seems, however, so easily derivable from dot-and-circle markings—such as are found on many Iberian objects[5]—as to make its occurrence an unsafe basis of conjecture concerning the precise line its introduction followed. We may, nevertheless, in passing, note that it occurs on a number of examples of Trojan Later Geometric pottery,[6] and on certain Early Iron Age objects found in Scandinavia.[7]

Fig. 6. An armlet, practically identical in ornamentation and in size with the one of fig. 5, broken in two during its removal. Length, about 10·5 in.; width, 0·73 in.; opening, about 3 in.; weight, 2·05 oz.

Fig. 7. An armlet, formed of a flat strip whose square-cut, slightly tapering ends resemble highly-conventionalized heads of animals. Length, about 11 in.; width, 0·5 in.; weight, 1·35 oz. The outside, excepting for the parts occupied by the heads, is ornamented uniformly throughout its length with a raised rib along either edge and a line of very small circular punch-marks along the longitudinal axis. The inside is plain. It has been bent out of its original shape; and, during removal, broken into three pieces.

[1] Cf. Minns, *op. cit.*, p. 402, for reference to some animal-headed examples; and *ibid.*, p. 401, *Ant. Rus. Mér.*, pp. 316 *seq.*, for illustrations. Others had complete animals represented in profile at their ends; cf. *infra*, remarks on fig. 7.

[2] *Ant. Rus. Mér.*, pp. 318 *seq.*

[3] Cf. 'Weapons of the Iberians', pl. xiv (*b*); Paris, *op. cit.*, vol. ii, pl. x.

[4] Cf. 'Weapons of the Iberians', pp. 238, 257.

[5] Cf. Paris, *op. cit.*, vol. ii, pp. 266, 268, 270, 52, 55, 59, pls. iii, v, for some examples.

[6] Cf. H. Schmidt, *H. Schliemann's Sammlung trojanischer Altertümer*, Berlin, 1902, figs. 3625, 3628, for precisely the present form; and *ibid.*, figs. 3626, 3627, for slight modifications of it. Cf., also, *ibid.*, p. xvii.

[7] Cf. Worsaae, *op. cit.*, p. 84, fig. 365.

In this object we seem again to see Greek influence. In the tomb, at the Great Bliznitsa, in which was found the remarkable neck ornament referred to above (p. 171), there was found a flat coil-armlet of gold, ornamented with a raised rib (formed of a sort of beading) along either edge and a broader rib (covered with a sort of chevron pattern) along the central part. A picture [1] of the armlet seems to indicate that there are also some longitudinal lines lightly engraved on the part between the ribs. The terminal sections, which are flat

Fig. 6.   Silver armlet.

Fig. 7.   Silver armlet.

and only slightly expanded, are each ornamented with a crouching lion seen in profile. Another armlet, somewhat similar, found at Karagodeuashkh, has a sea-horse with curved tail at either extremity.[2] Another, ending in lions' heads, found at Theodosia, shows a very similar arrangement of central and edging ribs.[3]

Fig. 8. An armlet, formed of a circular rod with a well-modelled snake's head at either end. Length, about 12 in.; diam. of rod, 0·2 in.; weight, 2·3 oz. It has been bent somewhat out of its original shape; it extends at present over a little more than a circumference and a half.

Serpent-headed silver armlets are not uncommon in Spain. The Mogón find included one [4] with ends formed as 'serpents' heads, which are still complete in all their details'. Several others have been referred to by Sandars,[5] of

[1] Cf. *C. R. Comm. Imp. Arch.*, 1869, pl. i, fig. 16.   [2] Cf. Minns, *op. cit.*, p. 217.
[3] Cf. *ibid.*, p. 401; *Ant. Rus. Mér.*, p. 316.   [4] Cf. *Proceedings*, xxviii, fig. 5 and p. 58.
[5] Cf. *Supplement* (privately printed) to 'Pre-Roman Bronze Offerings', pp. 8, 12.

which perhaps the most interesting to us is the one found with other silver
ornaments at Cheste, in the province of Valencia,[1] consisting of a coiled narrow
strip, several turns long, whose exterior is ornamented with a line of small cir-
cular depressions (each containing one or more dots) recalling the similar line
of considerably smaller circular punch-marks in fig. 7, *supra* ; this armlet appears
to have been buried towards the end of the third century B.C.[2] A snake-shaped

Fig. 8.   Silver armlet.   Fig. 9.   Silver armlet.

silver armlet, spiral and with the head very well made, was found at Jávea, with
the gold diadem I have already cited (*supra*, pp. 164-5).[3]

The use of serpents' heads as the terminals of an armlet, especially where
animal-headed armlets otherwise occur, seems so obvious a device that one
would, I think, be unwise to claim definitely, because of Greek things of the
kind, that the present piece was derived as I suppose from a Greek model
or made under strong Greek influence. That pairs of serpents' heads were
actually used thus on armlets of circular section by Greeks is shown by examples
in the British Museum.[4]

Fig. 9. An armlet, formed of a heavy circular rod increasing very gradually

[1] The Cheste find has been described and in part figured by Mélida, 'Antigüedades ante-romanas
de la costa de Levante,' pp. 164 *seqq.* and pl. v ; on the coil-armlet cf. pp. 170 *seq.* ; his paper has been
in part reproduced by Almarche Vásquez, *op. cit.*, pp. 96 *seqq.*

[2] Cf. Mélida, 'Antigüedades . . . de Levante,' p. 168.

[3] Cf. Mélida, 'El tesoro ibérico de Jávea' ; on the silver objects, pp. 371 *seq.* and pl. xvii.

[4] Cf. *Cat. Jewellery, cit.*, nos. 1602 (Archaic Greek, from Cyprus), and 2775 (fourth-third centuries
B.C., from Vonitza) ; also, pp. xliv *seq.*, and General Index, for references to examples of other work-
manship and later periods.

in thickness towards either extremity; it is unornamented, and has plain square ends. Length, about 12·8 in.; weight, 4·55 oz. It looks as if it had been bent out of shape, for the present diameter of its opening is only about 2 in., and the rod occupies over a circumference and two-thirds.

Fig. 10. An armlet, similar to the one on fig. 9 and (although lighter and shorter) probably intended to form a pair with it. Length, about 10·7 in.; diam. of opening, about 2 in.; weight 3·3 oz.
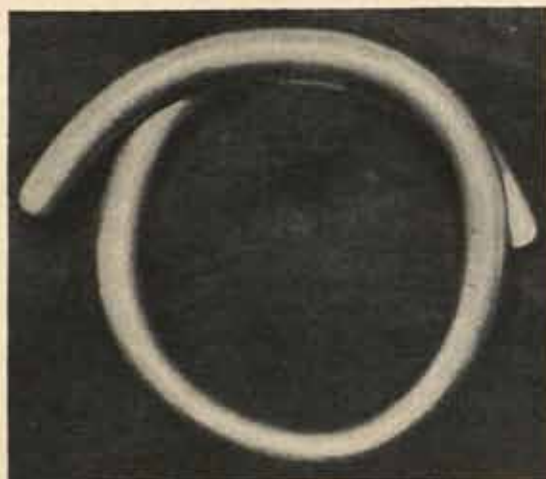
Fig. 11. (a) An ornament, of the nature of a torc, consisting of a circular rod having at either extremity an object shaped like a double-cone with a slightly-curved outer

Fig. 10. Silver armlet.

end; a few inches from each of the terminal objects there is a small swelling in the rod, ornamented with lines cut longitudinally. Length, about 25·5 in.;
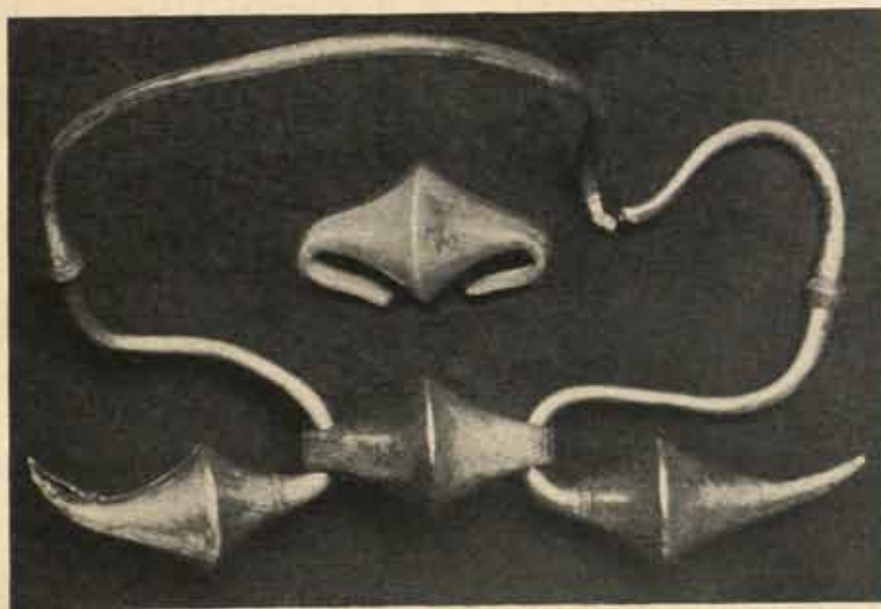
Fig. 11. Silver torc: in centre, side view of object immediately below it.

diam. of rod, about 0·16 in.; weight, 4·55 oz. Round the inner end of either cone is engraved a band of ornament, $\bigwedge\bigwedge\bigwedge$. The object has been bent out of shape and broken in two, and its tips look as if something had been broken away from them.

(*b*) An ornament (of which two views appear here—a side view at the centre of the photograph, and a front view below it), formed of a double-cone whose extremities have been elongated, flattened, and turned towards each other. Weight, 1 oz. The pattern shown above has been engraved round the top of each of the two cones.

These two objects have obviously been intended to be worn together. Señor Cabrera suggested to me that the smaller one had been used as a clasp, passing through loops of cord on either edge of a garment, at the chest. The piece looks as if it might indeed have served in that way in conjunction with the other piece worn as a torc. It seems more likely, however, that the two objects are parts of a single ornament—of a kind of which I have, however, found neither an ancient parallel nor a recognizable representation, whether from the Peninsula or elsewhere—and were worn together as illustrated, because, when the two pieces are set together in the position shown, the bent portions of the smaller one fit very accurately and tightly over the stem of the larger.

Ancient torcs or armlets with their terminals bent back, like those of the larger object here, are fairly common. For example, there are gold bracelets found by Schliemann on the site of the Homeric Ilios which have recurved ends with conical tips;[1] there are many Irish torcs which have recurved ends shaped like long cones with their bases outwards;[2] and there is a type of Iberian fibula, fairly common in bronze, with recurved ends shaped like very short cones set with their bases outwards.[3] Penannular objects ending in double-cones (the outer cones sometimes truncated) are also fairly common; several gold ones discovered in Galicia have been figured in the *Museo español de antigüedades*,[4] and other Spanish ones (in the Madrid Archaeological Museum) by Paris, *Essai*, vol. ii, p. 245, figs. 382 (a silver bracelet) and 384 (a silver torc);[5] they occur, also, in Scandinavia. We may see pointless double-cones employed in the jewellery of the famous 'lady of Elche'[6] in the small objects pendent from groups of cords on either side of her neck. The ornamentation—a band of slender chevrons surmounted each by a tiny circle—engraved upon the present pieces in several parts, occurs on other things of Spanish origin.[7] The small

[1] Cf. *Ilios*, Lond., 1880, pp. 458 *seq.*

[2] Cf. E. C. R. Armstrong, *Cat. Irish Gold Ornaments*, Dublin, 1920, pl. xii.

[3] Cf. J. R. Mélida, *Excavaciones de Numancia*, Madrid, 1912, pl. lx and p. 43; Paris, *op. cit.*, vol. ii, pl. viii, figures a typical fine example.

[4] Cf. 'Adornos de oro encontrados en Galicia', by J. Villa-amil y Castro, in vol. iii (1874), pp. 545 *seqq.* and pl.

[5] Compare, also, the ends of gold torcs in the Museum, shown in *ibid.*, p. 246, fig. 383.

[6] Cf. Paris, *Essai*, vol. i, pl. i and pp. 279 *seqq.*; Pijoan, *op. cit.*, pp. 68 *seqq.*; etc.

[7] E. g. a large gold torc in the Madrid Museum (cf. Paris, *op. cit.*, fig. 386), whose engraved ornamentation is referred (cf. *ibid.*, pp. 245 *seq.*) to Celtic influences. While chevrons alone are too

globular expansions in the rod of the larger piece are perhaps a feature due to Celtic influence; various Celtic personal ornaments, from sites outside of the Peninsula, show similarly swelled portions in thin rods.

Fig. 12. A fragment, composed of two horses' heads and necks, joined back to back by a stout bar. Weight, 1·3 oz. The heads are in the round, and have a rough irregular hollow about $\frac{3}{16}$ in. deep in the bottom of each. The piece is slightly curved, in part at least due to distortion, so that it is concave on the face figured and convex on the opposite face. The bar, at the middle and on the side here figured, exhibits the surface of a break about $\frac{5}{16}$ in. wide, indicating a former attachment at that place between the object and something else.

I am much inclined to think that this object formed part of a fibula, though one of a rare type. At Madrid there was sold in 1913 a small treasure found at Caudete de las Fuentes, in the province of Valencia, which contained, in addition to another very curious silver fibula and a gold necklace, an incomplete fibula of silver whose bow began at a pair of horses' heads somewhat more realistic in treatment than the present ones but arranged just as they are; this fibula had, in its upper part, a human figure 'difficult to describe, because it was

Fig. 12.   Silver fragment.

in a very crushed state'.[1] The broken surface on the present object looks as if it might very well have been the point of juncture between the object and a fibula's bow in a plane perpendicular to the plane of the object. A silver fibula of peculiar form, surmounted by a small figure of a horse is at Madrid, having formed part of the treasure found near Santisteban del Puerto.[2] Bronze horses, some with riders, occur not infrequently as the bows of Iberian bronze fibulae;[3] I do not recall, however, any bronze fibula in which two animals'

common elements of ancient ornament to be worthy of citation, it is perhaps worth noting that ornamentation formed of chevrons tipped with little circles occurs on Bronze Age things from Switzerland and elsewhere (cf. A. Bertrand, *Archéologie celtique et gauloise*, Paris, 1889, figs. 46, 47); on pre-Etruscan pottery (*ibid.*, fig. 59); on Iron Age antiquities from Livonia (cf. J. R. Aspelin, *Ant. du Nord Finno-Ougrien*, Helsingfors, 1877, p. 366); etc. Perhaps of interest in relation to these examples is the Trojan pottery ornamented with a band of chevrons containing (instead of tipped with) each a little circle (cf. Schmidt, *op. cit.*, no. 2544), a pattern very similar to one to be seen on a black pottery fragment found at Numantia (cf. Mélida, *Excav. de Numancia*, pl. xxiii).

[1] Cf. Almarche Vásquez, *op. cit.*, p. 89 and (for an indistinct picture of a plaster cast of the object) pl. facing p. 90.

[2] Cf. Mélida, *Mus. Arqueol. Nac.: Adquisiciones en 1917*, p. 13 and pl. v.

[3] For some examples see Paris, *op. cit.*, vol. ii, pp. 268, 270; J. Déchelette, *Manuel*, vol. ii, 2, pp. 854 seq.; Mélida, *Excav. de Numancia*, pl. lx. Compare, further, the small bronze figures of horses shown by Paris, *op. cit.*, pp. 201 seq.

heads are set as are the heads here. Conceivably, however, it served as a handle for a small lamp or other vessel, although the broken surface is so narrow as to suggest that if an attachment to a vessel were made through it, the vessel must have been one of light weight. It seems still less likely to have served, set in a position approaching the horizontal, as the upper support for a slender handle rising from the place of the fracture and then curving downward to meet the lower part of the body of the vessel.[1] In either case the hollows might (although their roughness and irregularity do not seem to favour the idea) possibly have served to engage projections helping to hold it in place. The Victoria and Albert Museum contains (no. 364—1854) the bronze handle of a vase, ancient Greek or Etruscan, having two horses' heads, much farther apart but set as are the heads here; the construction of this is, however, not like the construction of the present piece. M. Paris figures and describes[2] a small bronze object, in a collection exhibited at Palencia, having a pair of horses' heads set back to back, and refers (loc. cit.) to many small bronzes representing a similarly-set pair of heads of bulls or cows.[3]

Fig. 13. Fragment of silver rod.

Fig. 13. A fragment, consisting of a strongly-curved rod about 4 in. long, shaped as if composed of a series of complete reels whose bodies each taper towards the flanges, set end to end; the terminal 'reels' lack flanges at their outer extremities.[4] The object shows traces of gilding. Weight, 0·5 oz.

[1] Compare the Italo-Greek bronze amphora figured by Déchelette (op. cit., vol. ii, 3, p. 1048), which has, as such upper supports, pairs of the fore-parts of horses set at an angle approaching the vertical. It should be observed that the present object seems to bear no marks indicating that it was set in a similar position against the side of a vessel.

[2] Op. cit., vol. ii, fig. 252, pp. 206, 209.

[3] In Ant. Rus. Mér., p. 472, there is figured a roughish bronze ornament from the necropolis of Kamounta (where both early antiquities and antiquities of Byzantine times have been found), formed of a pair of horses' heads back to back and a loop, seemingly for suspension, which rises half-way between them. A number of pendants formed of horses' heads are figured amongst Iron Age things from the Perm district (cf. Aspelin, op. cit, pp. 154 seqq.); to these a Livonian Iron Age pendant (cf. ibid., p. 377) seems related. There is in the British Museum a bronze buckle, found at Stanwick (cf. B. M. Guide . . . Early Iron Age, fig. 121 and p. 135; the buckle is now, however, regarded as made at a period considerably later than the one to which it was formerly assigned), whose character makes it appear 'quite isolated in Britain' and suggests that it was brought to Britain from the East, which (although closed across the top) has some likeness to the present object.

[4] A very similar design appears on a capital, of which part was found near the Cerro de los Santos (cf. 'Pre-Roman Bronze Votive Offerings', pp. 72 seqq.), figured by Paris (op. cit., vol. i, p. 42) and called by him (cf. ibid., p. 44; also, loc. cit.) 'Ibero-Greek'; in the case of this capital a third and identical flange is interposed between the end-flanges of each two adjacent 'reels'. Other pieces found in the Peninsula and showing similar arrangements could be cited.

The two central 'reels' show, on one face, clear evidence of their former attachment to some other object; and the ends of the piece are irregular, as if either something had fitted over the tips or something had been broken away from each terminal and the fractured surface afterwards had been partly smoothed. I suggest, very tentatively, that the present fragment may possibly have been part of a personal ornament of some kind, derived from, or otherwise closely related to, the very curious bronze ornaments formed of a small pair of spirals joined to a large spiral (or pair of spirals) by means of a band of wires, discovered by the Marques de Cerralbo in the women's graves in the Iberian necropolis of Aguilar de Anguita.[1] Sandars' illustration of the ornaments from Aguilar de Anguita shows portions of them—i.e. the part, in each, whose ends are continued as the pair of small spirals and whose middle is held by one end of the group of wires—having about the same general form as the present piece. This latter may, so far as we now can judge from the broken surfaces

Fig. 14.   Lump of silver.

that it shows, have ended in a pair of spirals (or other things replacing spirals) and its middle 'reels' may have had a bar, or two bars or stout wires, attached in the position of the group of wires the bronze examples show.

Fig. 14. A rough lump, from the melting-pot; weight, 5·95 oz.   Similar lumps occurred in the treasures of Santisteban del Puerto[2] and Mogón[3]; the Mogón lump weighed about 40 oz. troy.

In addition to this lump there were two other pieces, not illustrated: a small wedge-shaped piece, cut from a lump like the one of fig. 14, weight, 0·53 oz.; and a small hammered lump, weight, 0·08 oz.

[1] Marques de Cerralbo, 'Nécropoles ibériques,' in *Comptes rendus Congrès Internat. d'Anthropologie et d'Archéol. préhist.*, Geneva, 1912, p. 609, fig. 13; and 'Weapons of the Iberians', fig. 8. Compare also some fragments composed of small pairs of spirals, found in a fourth-century B.C. woman's grave in the Iberian necropolis of Olmeda (cf. *Bol. Soc. Esp. de Excursiones*, vol. xxiii [1915], pl. facing p. 227).   On the Marques de Cerralbo's excavations, see his *op. cit.*, pp. 593 *seqq.*; *Bol. Soc. Esp. Excurs., vol. cit.*, pp. 225 *seqq.*; Déchelette, in *Comptes rendus Acad. des Inscriptions*, Paris, 1912, pp. 433 *seqq.*; Marques de Cerralbo, *ibid.*, pp. 526 *seqq.*; Déchelette, *Manuel*, vol. ii, 2, pp. 687 *seqq.*; M. de Artiñano y Galdácano, *Cat. Exposición Hierros Antiguos Españoles*, Madrid, 1919, pp. xvii *seq.*, xx *seq.*, xxiii, 3 *seqq.*; and 'Weapons of the Iberians', *passim*.

[2] Cf. Mélida, *Mus. Arqueol. Nac.: Adquisiciones en 1917*, p. 12.

[3] Cf. Sandars, *Proceedings*, xxviii, p. 57.

Coins. A number of coins, which I understood from Señor Cabrera to have been the whole of those found (with the exception of a dozen or so, disposed of by him as duplicates), were with the silverwork when I made my notes in 1916; these coins (possibly modified by a few additions; cf. *infra*), numbering 317½, have been submitted to the British Museum for examination. From the preliminary report upon them, by Mr. E. S. G. Robinson, the following is quoted:

'. . . with the hoard came fourteen coins purporting to form part of it which must all probably be regarded as intruders on account of their date and also of their condition and appearance; these comprised 10 Imperial denarii ranging from Augustus to Septimius Severus, a denarius of Barbatius for Mark Antony (B. C. 41), another of L. Rubrius Dossenus (B. C. 86), and a quinarius of M. Cato (B. C. 90), so worn as to be almost illegible.

Adopting the local and chronological arrangement of the *B. M. Cat.* of Coins of the Roman Republic the Roman coins contained in the hoard fall into the following periods:

Before B. C. 197	15 denarii, including 8 without symbols or letters.
196–173	5 denarii and 1 (the only) victoriate.
172–151	49 denarii.
150–125	64 denarii.
124–103	41 denarii.
102–90	47 denarii.

There is no coin (always excluding the "intruders" described above) to which a later date than B. C. 90 can be given, while the earliest of the denarii, two specimens with the symbol wreath, appear to fall before B. C. 240; both of these curiously enough are in very good condition, and it is characteristic of the hoard that on the whole the earlier coins are not much more worn than the later. The find also contained 82½ Celtiberian coins, most of them in good condition; indeed if, as is generally believed, the Celtiberian issues came to an end in B. C. 133, for coins which must have been in currency for at least forty years their preservation is unusual.'

The 'intruders' have been cited (cf. *supra*, p. 164) as evidence suggesting that the hoard was buried later than the date I have claimed. It is well to note, therefore, that the report's observation as to their condition and appearance was in no way suggested by me; before submitting the coins to the Museum, I had never examined them at all closely and I had no idea that any of them were doubtful members of the hoard. We may next observe that the coins whose attribution to the hoard is not questioned are all clean and have the same general appearance as have the other objects, whilst most of the other coins have a considerably darker surface. Furthermore, that the unquestioned members form a group, of over 300, ending precisely at the point where the coins of a number of other hoards exhumed in the district end, while those whose proper inclusion is very doubtful number only fourteen, and their dates are

spread over a period of about three centuries. Of the coins, two are examples
of the curious tin issues, as to whose purpose there has been considerable
speculation,[1] one of these purporting to be of a date earlier than B.C. 90, the other
being a denarius of Septimius Severus. A great hoard (700 denarii) of similar
tin coins, found at Lyons, led to a suggestion that the emperor Severus, after his
visit to the tin country of Britain, conceived the idea of a tin currency to supple-
ment the small quantities of Roman bronze that reached the provinces, but that
his experiment was abandoned almost immediately because the coins produced
were too easily confused with silver coinage. But as such coins were made of
a metal obviously softer and lighter than silver, and as it seems extremely un-
likely that a working silversmith would be taken in by them, we may reasonably
assume that the present two were not found as part of our hoard.

A simple and highly probable explanation as to how these 'intruders' might
have become mixed amongst the coins of the hoard is not difficult to find.
Señor Cabrera, although he disposed in 1916 of the silverwork and some of the
coins of the hoard, retained until the summer of 1919 the greater part of the coins.
During the intervening period it was natural for him to look upon these latter
as having no reference to the hoard from which they had been separated. From
time to time loose coins have been picked up on Señor Cabrera's land—which
(cf. *supra*, p. 162) is adjacent to a Roman road and includes part of a Roman
cemetery—and it seems to me more than probable that, with no thought of the
possible archaeological consequences, he dropped, even before the division of
1916, such of those which were brought to him in amongst the coins of the hoard.
Then, when in 1919 he disposed of $238\frac{1}{2}$ coins, the few additions he had made
had perhaps been forgotten, or were perhaps not considered by him to be worth
mentioning, and in any case were overlooked. I have not had the opportunity
of verifying this hypothesis, but it appears to me, considering the very varied
character of the 'intruders',[2] to hold a high degree of probability.

As has been pointed out above (p. 162), there are good reasons for believing
that the later coins (excluding the intruders) of the hoard should properly be
dated somewhat earlier than B.C. 90. Mr. Mattingly, who has kindly permitted
me to quote in full his note to me on this matter, of which the concluding
portion has already (*loc. cit.*) been given, says:

'The Cordova find is unmistakably similar in character to a number of other Spanish
finds—Cazlona, Oliva, Ricina (*B. M. Cat.* Rep. III, List of Finds, p. 2 ff., nos. 7, 8, 9), and

[1] Cf. G. Macdonald, 'A Recent Find of Roman Coins in Scotland,' in *Num. Chron.*, 4th series,
vol. v (1905), pp. 14 *seqq.*

[2] Macdonald has suggested (*loc. cit.*) very plausibly that the Roman tin coins were made as votive
offerings. It is tempting to think that the two accompanying this find were left by fearful passengers
along the road through the cemetery.

the Sierra Morena (*Num. Chron.* 1921, p. 179 ff.). On Grueber's dating it would have to be assigned to about B.C. 89. There are, however, cogent reasons for thinking that the whole group of finds belongs to a period nearly fifteen years earlier. This would, of course, involve a redating of a number of moneyers; but, as many of them have already been assigned by good judges to dates before B.C. 100, this consideration need not disquiet us.

The decisive arguments for an earlier date are:

(1) The denarius of Piso and Caepio, which is common in later finds, occurs in no single find of this group. Its date is practically certain, B.C. 100 (cf. *B. M. Cat.* Rep. I, p. 170 and notes).

This evidence, in itself, is very nearly decisive.

(2) The denarius and quinarius of M. Cato occur in no single find of the group. The relation of this coinage, with the remarkable epithet "VICTRIX" given to Roma, to the victory over the Cimbrians and Teutons is unmistakable. Its date is therefore *c.* B.C. 101.

(3) The exceptional coinage of L. Licinius Crassus and Cn. Domitius Ahenobarbus, in conjunction with M. Aurelius Scaurus, L. Porcius Licinus, and three other moneyers, was once assigned with confidence to the year of their joint censorship, B.C. 92. The participation in the coinage by censors would itself be exceptional. The rev. type of the issue, which shows a barbarian in biga r., seems to refer directly to the wars in Gaul from B.C. 123 onwards; and the issue probably celebrates the foundation of Narbo in B.C. 117.

(4) Sext. Iulius Caesar (*c.* B.C. 94, Grueber) was probably the praetor of B.C. 123; moneyer then not later than *c.* B.C. 135. C. Pulcher (*c.* B.C. 91, Grueber) was undoubtedly consul in B.C. 92; moneyer then not later than *c.* B.C. 105 (cf. notes on his career, *B. M. Cat.* Rep. I, 198, note 2).'

[Here follows the portion quoted on pp. 162-3, *supra*.]

In a letter sent with the above note, Mr. Mattingly says: 'The main point is that as the group of finds never shows common coins of the years B.C. 101–100, it must be earlier than that date. The historical evidence clinches the matter.'

X. *Some Unpublihsed Plans of Dover Harbour.*
By WILLIAM MINET, *Esq., M.A., Treasurer.*

Read 1st December 1921.

DOVER has been both fortunate and unfortunate. Its misfortunes it has shared with the other harbours on the south-east coast, and if its fortune has been to escape the fate which has overwhelmed them, this is due solely to its proximity to the opposite shore, and the consequent necessity of preserving it as a port of passage, an end which has only been achieved by a continuing expenditure of public money; nor is the tale, as some think, even yet all told.

Before I attempt to describe what has been done to keep open a port at Dover something must be said as to the nature of the danger which, attacking all our south-eastern harbours, has in turn ruined every one of them but Dover.

The English Channel forms a funnel which, opening from the Atlantic, reaches its narrowest point opposite Dover, whence the French shore is only twenty-two miles distant. The flood-tide running eastwards from the ocean is forced into this ever-narrowing funnel, with the result that its violence increases as it travels onwards. On the other hand, the returning ebb runs far more slowly as it passes westwards up the ever-widening funnel. The flood-tide therefore is a far more effective carrier than the ebb.

Add to this violence of flood-tide due to the configuration of the coasts the fact that the prevailing winds in the Channel are west and south-west, and we have a doubly strong power ever sweeping along our south-eastern shores. The chief effect of these mighty forces is seen in the gradual choking up of the south-eastern harbours, some by shingle, some by sand, and in the formation of banks in the open sea such as the Goodwins and the countless sand-banks fringing the opposite coast. This result is due to the fact that the bed of the Channel is covered with the detritus of earlier formations: this, caught up by the sweep of the flood and carried on by the trend of tide and wave, is deposited where the shifting eddies and currents drift it.

What these eddies and currents are it would take a skilled Channel pilot to know. How they are caused is fairly obvious. The Atlantic tide flows eastwards up the Channel; but, severed where it strikes Ireland, a part passes up

north, round Scotland and down the North Sea; this also reaches the Channel at its eastern end, many hours later it is true, but when it does get there it causes by opposition with the direct tide a series of eddies and cross currents. Caught in these swirls, the matter till then held in suspension is dropped on to the floor of the sea, there to grow into one of the main dangers of the Channel navigation.

These, then, are the general laws to which are due the deposits of shingle and sand which have choked our south-eastern harbours. In the case of some of these lost harbours, such as Sandwich and Rye, other causes have contributed, such as deposits of mud washed down by the rivers which still have
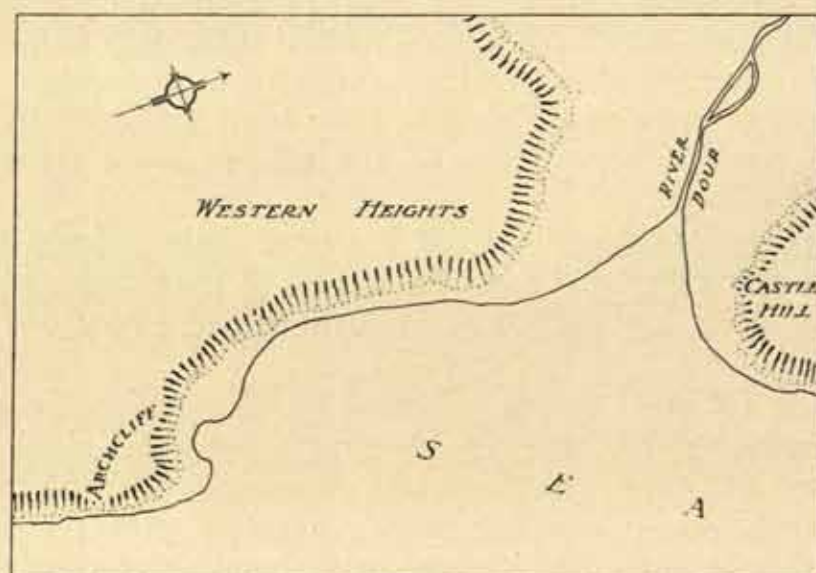
Fig. 1.

their estuaries near these towns. In the case of Dover, however, this cause, at any rate in historic times, may be eliminated, for here the river Dour has not contributed in any great degree to the silting up of the harbour, the result being mainly due to accumulation of shingle.

The history of Dover harbour, or rather of the Dover harbours, for there have been several, is one of successive failures, and the first point we have to grasp in studying it is that every attempt made to improve matters has held in it the seeds of its own ruin. Every remedy applied, remedies carried out at enormous cost, has produced some temporary and local improvement, but in a very short space of time the remedy has brought about the same, often indeed a worse state of things, than that which it was intended to reform.

Let us now consider in order the various harbours of which any record remains, and first it will be well to picture to ourselves the bay, in some one or other part of which they have successively been placed. Bay is almost a

title of courtesy, for taking a straight line from the South Foreland to Shakespeare's cliff the indentation at the most is less than half a mile, while if we deal only with Dover proper and substitute the Castle cliffs for the South Foreland, a perpendicular drawn to the old shore line is only half that.

The shore of this slight indentation is formed by cliffs. Shakespeare's cliff, which lies south of the bay, after sinking slightly to form Archcliff, continues northwards as the Western Heights as far as the abrupt and narrow cleft through which the Dour finds its way to the sea; this cleft is closed on its farther side by the higher cliff on which stands the Castle (fig. 1). In the valley thus formed lies the old town of Dover, which must from the first have stood on the
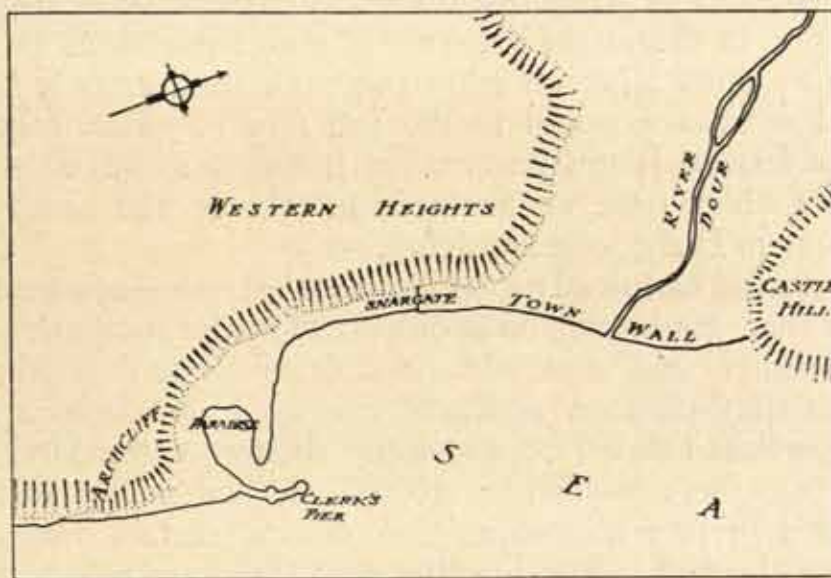
Fig. 2.

edge of the sea. As the delta formed by the river advanced, so the town grew with it until by the fourteenth century its seaward limits were fixed for a time by the wall which has left its name to Town Wall Street. Through this wall, hard by Butchery Gate, the Dour passed to the sea. The face of the town wall, as also the foot of the Western Heights which continued its line beyond Snar Gate to the south, were at this date washed by the sea (fig. 2). Late in the sixteenth century the town again advanced seaward, and modern Dover, the Dover of docks, harbours, and esplanades, has spread out in front of this line, built on beach piled up by the sea. It is the gradual growth of the land so won that a study of the successive harbours enables us to follow, for it is to the efforts made to construct and keep open a harbour that the whole of this land owes its existence.

My object being to trace the origin of the harbour as it is to-day, I do not

propose to do more than mention the first two havens, and indeed all that is known about them is only legend.

Once, no doubt, the Dour was a tidal river, and ships are said to have sailed up its estuary and to have anchored in safety in the valley, on the spot now occupied by the market-place.

That some such haven existed receives strong confirmation from the account given by Caesar of his attempted landing at Dover on his first expedition to Britain,[1] where the description exactly fits such a harbour. It must, however, later have become blocked, partly by material brought down by the river, partly by shingle driven in by the sea.

The next harbour of which we have any definite knowledge lay just outside the town wall, in the angle between this and the slight projection of the Castle cliff. This must have afforded but poor shelter, for it lay open to the south-west and so was exposed to the full fury of gales from that quarter. When this was formed is not known, but it seems to have sufficed down to about 1495, from which date we are able to take up the history and interest of Dover harbour in fairly accurate detail.

The one fact men had firmly grasped was that the south-west wind was the danger; where then could this be avoided? On the southern side of the bay the Western Heights bend seawards and sink a little, to form what is known as Archcliff, before they pass on again to rise up to Shakespeare's cliff. The slight projection thus formed offered some shelter of the kind required. At the foot of the cliffs, here much less steep, some soil mixed with shingle had accumulated, and in this a pool existed, due to certain springs which rose under the foot of the cliff to run into the sea: these are now lost, though their memory remained until lately in Spring Street. The shelter was but slight, and the pool but small, but John Clerk (1495) showed how both could be utilized, and in him we meet the first engineer of the long series connected with Dover harbour works. He both improved the pool, and gave to its mouth more protection than the slight existing headland, if indeed it were worthy of the name, afforded. This he did by building a pier on the seaward side of the pool, and at the end of it he placed a tower of which the name lives on to-day in Round Tower Street. The idea was good, but the plan was vitiated by insufficient knowledge. Almost at once the difficulty which has been the ruin of every successive harbour from that day to this, began to show itself. I have spoken of the violence of the eastern running flood-tide, and of its accentuation by the prevailing south-westerly winds, and how both these causes combined drive the shingle and the sand eastwards up the coast. The

[1] *De Bello Gallico*, iv, 21.

sand, lighter than the shingle, is borne farther on until some appropriate eddy drops it to block Sandwich and to pile up the Goodwins. The shingle would pass along the shore more slowly but as surely, to find a home equally inconvenient to navigation farther on; but the moment the skill of man builds into the shore-current some projection to form a haven, within that projection lies, it is true, the wished-for boon of quiet water, yet into it, round the head of the projection, sweep with every gale shingle-laden swirls, dropping their burden in the still mouth of the harbour. Clerk never realized that this must ever be the case, and when his first scheme failed, in no way discouraged, he thought to remedy it by carrying his pier out a little farther, curving it inwards, and building at the newer end another tower.[1]

It is this pier and these two towers that we have in our print of 1520, where they form the setting for the embarkation of Henry VIII for Calais. So successful did the work appear, and so secure a shelter did the haven offer that men called it Paradise,[2] but its christening was premature, for by 1530 the farther tower had vanished, swept away by some south-west gale.

Whether Clerk was dead or only disgraced by the failure of his plans is not known, but in 1533 one Thompson took up the endless struggle against the sea, only to fail in his turn as signally as his predecessor.

That the state of the harbour was in fact perilous at this date, if indeed there was any harbour at all, appears from a letter from the town council to the king (15th January 1534),[3] in which they say that the town had possessed 19 or 20 ships, crayers and boats, but during the last ten or twelve years such a quantity of small stones had been cast up by the sea that the harbour was quite closed up and destroyed. The three or four crayers that were left must of necessity ride in the open sea.

The problem was threefold. First, to prevent the shingle silting into the mouth of Paradise; secondly, to protect the shingle bank which had accumulated on the seaward side of Clerk's pier, the shifting nature of which threatened the safety of the harbour from its rear and endangered the fishermen's hovels which had begun to appear there; thirdly, the entrance to Paradise required protection from the north-east, while the basin itself needed deepening. The last point was met by dredging, while a new pier was built out from the

[1] Fig. 2.

[2] The name survives in Paradise Street, which, until the recent clearance of this area, crossed the site of this harbour. The inner basin of Calais harbour, frequented by fishing-boats, is also known as Paradise, and it would appear that Dover took the name from Calais, for Mr. F. Lennel, the historian of Calais, tells me that the name was in use in Calais in the time of Edward III. He is unfortunately unable to give me any definite authority for this, since, living at Arras, his notes and his house have alike perished.

[3] L. & P., 25 Hen. VIII, 66.

northern side of the Paradise mouth curving round towards Clerk's remaining tower, thus protecting the entrance to the harbour from the north-east. To prevent, as was hoped, the shingle drifting round into the mouth of Paradise another pier was built starting from the shingle bank which had grown up on the seaward side of Clerk's works. The sea end of this pier lay east from Clerk's remaining tower and some distance farther out in the sea. Its object was to direct the shingle past the mouth of Paradise, and this indeed it did with results then unforeseen, but disastrous to the town, as will be shown later. The sea end of this pier was known later as the Black Bulwark; it underwent many transformations, one of which became the south jetty of a later harbour, and this still remains though barely recognizable.[1]
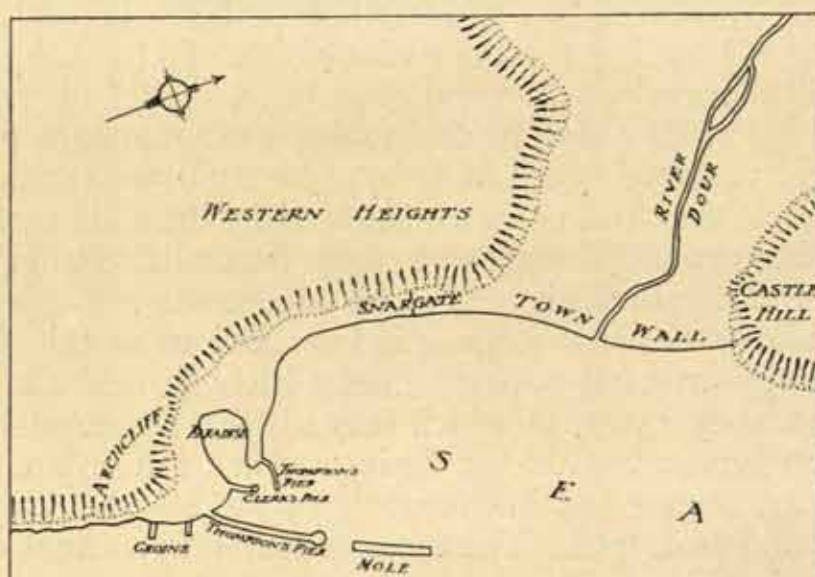
Fig. 3.

To guard against the danger which had threatened Paradise on the sea side two groynes were built out from the bank of shingle into the sea; these by arresting the beach added to the extent and solidity of the bank (fig. 3).[2]

A letter of Thompson's of the 20th September 1534[3] explains what was being begun at that date. The south jetty,[4] he tells us, is in length 165 ft. and in breadth 24 ft. 'We have begun the north jetty [i.e. the smaller pier on the

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[1] The remains of Thompson's Black Bulwark also survive in the last Ordnance plan of Dover as the Bull Rock.

[2] One of these groynes is shown in plate xxxvi. Against it is written 'The foot of the preble', 'The length of the groyne, standyng southe from the long or south est side is lx foot'.

[3] L. & P., 26 Hen. VIII, 1170.

[4] This would be his new seaward pier. One of the difficulties in interpreting these documents arises from their use of compass bearings, as these, of course, vary according to the points from which they were taken.
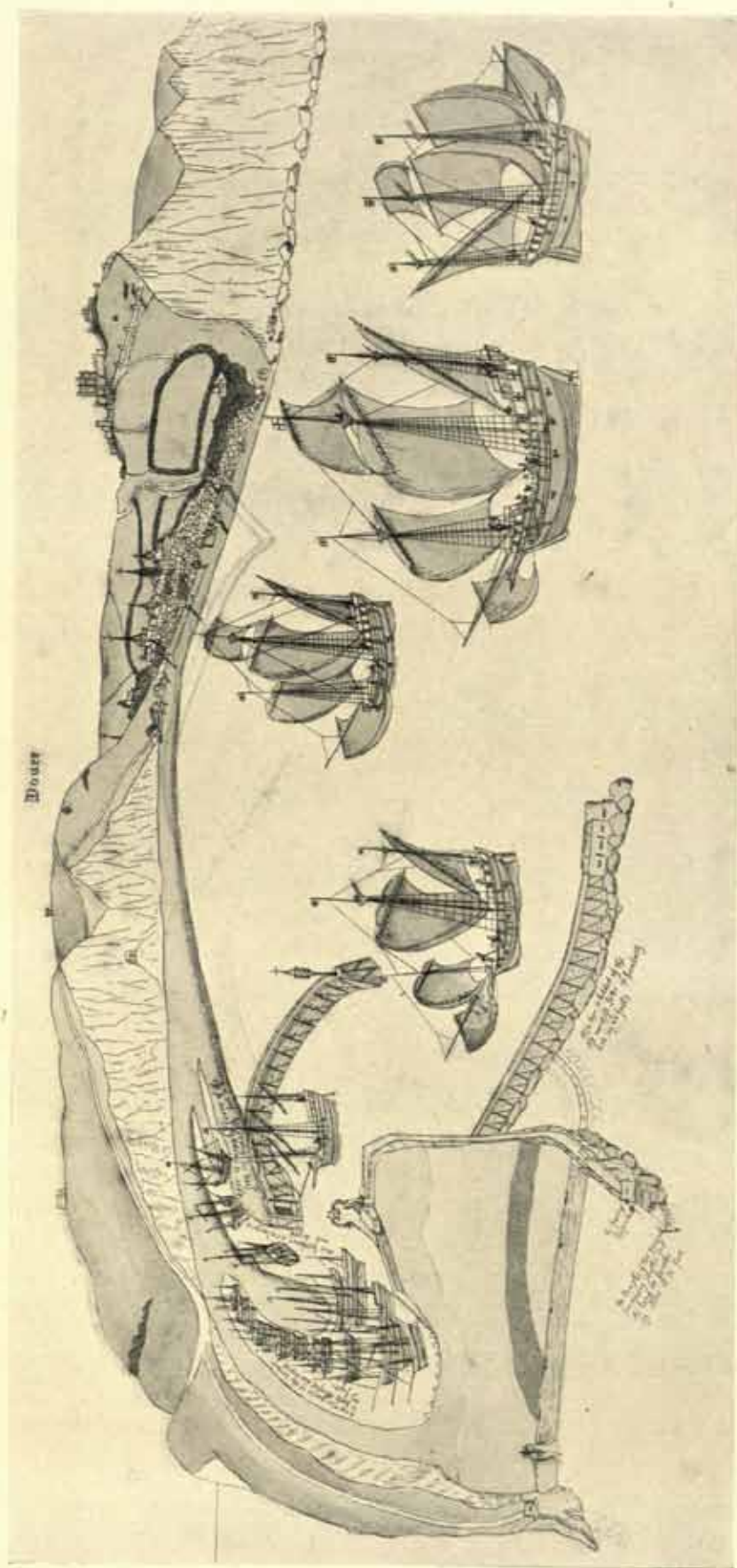
DOVER HARBOUR ABOUT 1543 (Cotton MSS. Aug. I. i, 22, 23)

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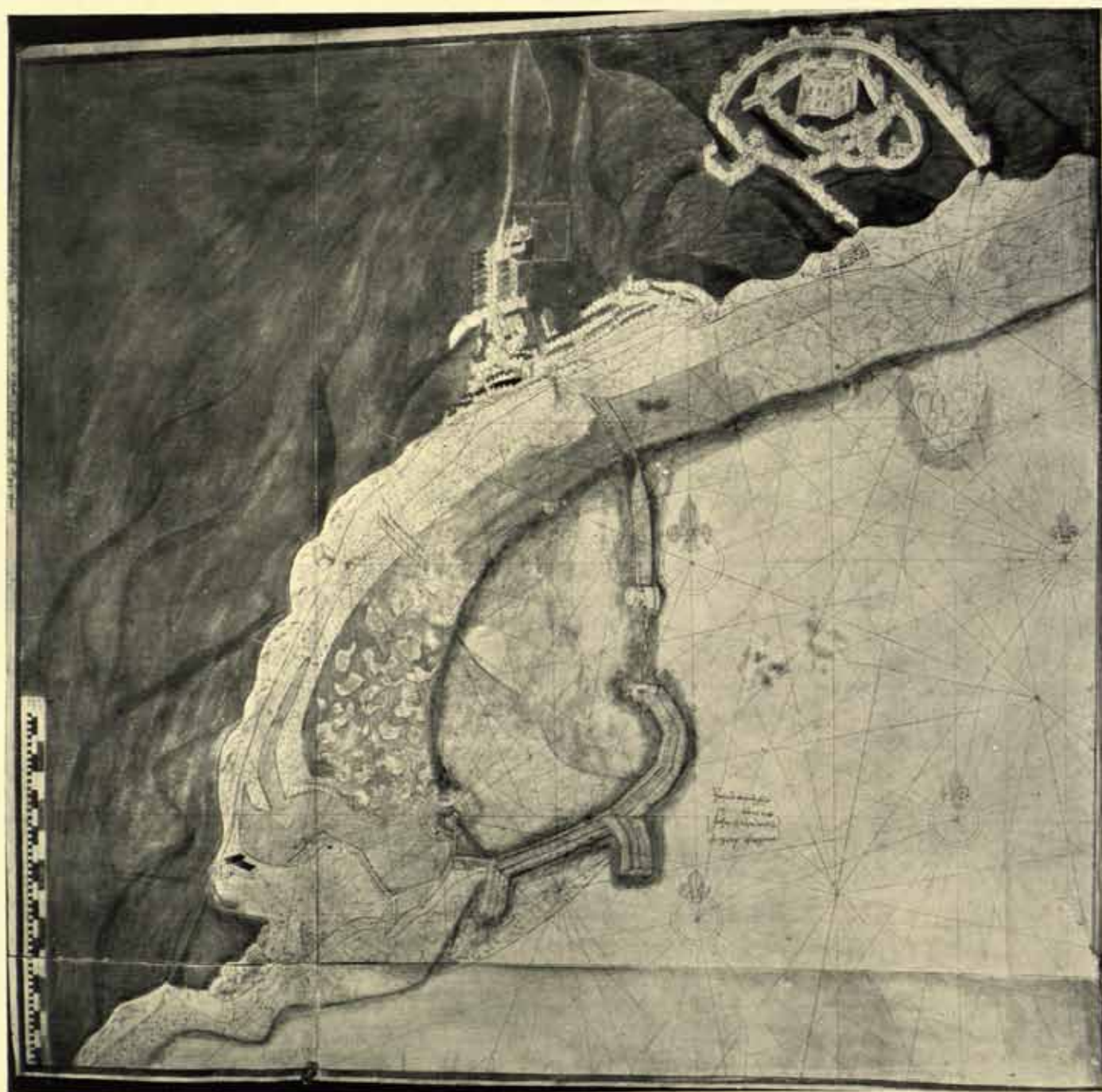
CAVENDISH'S PLAN FOR DOVER HARBOUR

north side of the entrance to Paradise]. The harbour is trenched [i. e. dredged] from the old pier head [Clerk's tower] to the west inward 400 ft., in breadth 100 ft. in the mouth, and inward 200 ft.; in the belly 400 ft., and in the south-west to the hills above 500 ft., and it flows within the harbour a fathom and a half, so that a crayer of 50 tons can lie in it.'

This part of the work is well seen in a contemporary drawing, half picture, half bird's-eye perspective, in the British Museum (pl. XXXVI).[1] This shows Paradise running up under the cliff in two 'sounds' or bays. In one of them is written 'This herbour is enlarged and deped', in another, the western, 'and this parte of the herbor is both clensed and deped vii foot'. We see on the south side of the entrance to Paradise, Clerk's one remaining tower, and on the north side Thompson's new curved jetty, carrying a beacon at its end. At the root of this is written over the shingle bank ' Here is caryd by the force of the sees iii hun-dreth foot and more'.

The new seaward pier is also given in this drawing, and ends in the fort which became known as the Black Bulwark. Against this is written 'Also ther is belded of the est north est jette ii hundreth and iiiixx feet'. This 'est north est jette' does not seem to have been a part of the original plan nor, though thus named by Thompson, is it shown in the picture, but it undoubtedly existed. Starting from opposite the Black Bulwark, thus leaving an outer entrance to Paradise, it formed a continuation of Thompson's main pier, and stretched across the bay towards the Castle for a distance of 280 ft. How much farther it was meant to go we do not know, for it was never completed. Its upper por-tion was destroyed before long by gales, but its foundations, always known as the Mole Rocks, remain to-day just north of the entrance into the present tidal basin.[2] Thompson evidently built considerable hopes on this extension, thinking it would offer shelter to shipping, for in a letter of July 1537[3] he says 'between the est north est jetty head [i.e. the Mole] & the foreland of St. Margarets there shall be slack water of 7 fathoms without stream or tide. Such a harbour would command the narrow seas.'

Thompson's work covered the period 1530-40 and he was assisted by one Cavendish; indeed Cavendish, with three others, must himself have submitted a plan of a new harbour, rejected, one must think, as being too bold for the times. This plan survives, and is a forecast in miniature of the

[1] Cotton MSS. Aug. I. i, 22, 23. Statham (*Hist. of Dover*, Lond., 1899) reproduces this, but without the lettering, its most valuable feature. A good reproduction of it was published by T. Rigden of Dover in 1838. It is difficult to date this plan exactly; it cannot be earlier than 1538, and is probably about 1543.

[2] They appear on all the later plans of the harbour, and are generally so named.

[3] L. & P., 29 Hen. VIII, 397.

modern outer harbour of to-day,[1] for it encloses a considerable area of the bay outside Paradise. This is done by two piers, one running south from the Town Wall, from a point just east of Butchery gate, one starting from the shingle bank dividing Paradise from the sea and curving round northwards to meet the first. At each pier head is a fort, and a boom is shown closing the entrance. Paradise is left available as an inner harbour, and at the entrance to this stands Clerk's Round Tower. The plan is signed Rich. Caundisshe, John Bartlett, John a Borough, Anthony Auchar. We know that Cavendish was controller of the works at Dover as late as 1542, and he is found at Boulogne in 1544, and Auchar is also named in 1538 as paymaster of the King's works.

Thompson was far from having grasped the conditions at Dover, and his plans could never have succeeded, but the letters of the time show that he was hampered by want of funds as well as by professional jealousies. He speaks in 1537 of being hindered by the controller, and in the same year one Wingfield writes to the paymaster at Dover, 'Here hath been since your departure I suppose the devil, the west pier is damaged and the other works,' and again in the same year he adds, 'The Master of the Masindwe [i. e. Thompson, Master of the Maison Dieu] aided by four mariners of the town began this labour without any experience, but ever as the blind man casts his staff; and so hath builded unto this day thinking he hath done well, and is clean deceived. The four mariners are honest men, but what building meaneth they know but as ignorent men doth.'[2] One wonders whether the four mariners were Cavendish and his fellow signatories of the plan just noted. Thompson even goes so far as to suggest in a letter to Cromwell that he has been poisoned.

Thompson's plans were conceived on a large scale, and were based entirely on improving and preserving the existing Paradise. In this object he failed completely, and at once, as the next available evidence shows. This is a panoramic view of the bay, drawn by Antony van den Wyngaerde. And first as to the date of this. The artist was a Fleming, and the drawing is now in the Bodleian Library (pl. XXXVIII).[3]

Not very much is known about Wyngaerde, but he is thought to have come to England in the suite of Philip, which would date the picture as not earlier than 1554. Later he was employed by Plantin of Antwerp to make a number of sketches of Spanish towns. These, now in the Victoria and Albert Museum, are sometimes dated, and the earliest date found on them is 1558, while they run

[1] Cot. Aug. I, 26. A similar plan is among the archives of the Dover Harbour Commissioners. Plate xxxvii is taken from the latter.
[2] L. & P., 28 Hen. VIII, 92,335.
[3] Sutherland Coll. B. 1. 71. It is unknown to all writers on Dover.

DOVER ABOUT 1558: from the drawing by Wyngaerde

on to 1567. The Dover picture, therefore, would seem to fall between 1554 and 1558.

It is common knowledge that Dutch artists may be trusted for accuracy in what they represent; but Wyngaerde's drawing differs so completely from its predecessor that were it not for the confirmation brought to it by plans of some twenty years later it would be impossible to believe that it really represented the harbour as we have seen it left by Thompson. And herein lies the great value of this picture, for it shows that already by 1556 Thompson's work had failed completely in its object and the Paradise haven had ceased to be a harbour. Indeed, Paradise is hardly visible at all in this drawing, but in its place we have the first beginnings of what is now the tidal basin.

Wyngaerde gives us Thompson's pier in the foreground with a prolongation running out seawards at right angles; this we know from other sources had been added. A little way short of the end of Thompson's pier, projecting inwards, is another short pier, having on its curved end a crane, whence it came to be called the Crane pier.[1] Inside the Crane pier, between it and the entrance to Paradise, lay a small area of water quite protected from the south-west and fairly well from the north-east seas. This became known as the Bight, and in its turn formed the only Dover harbour for some years. It was clearly the only harbour in Wyngaerde's time, and to show that this was so he fills it with ships. In confirmation of this may be quoted a report made in 1581 by 'the most sensible, ancient & skilful men and mariners of Dover' called in to advise on troubles that then befell the Bight, who 'affirm that they have known lie in the Bight within the crane' seven of the King's ships and 'they well remember that ships of 200 and better have ridden there'.[2]

The difficulty in understanding Wyngaerde's picture lies in a building which he shows on the sea side of Thompson's pier, opposite the root of the Crane pier. What this may have been I am at a loss to conjecture. It is clearly not Archcliff fort, for this is shown in the background in its proper position just on the first rise of the cliff, where the artist marks it by two cannon. It was no doubt some building which, exposed as it was to the full strength of the south-west gales, could not have stood long in such a position. There is no sign of the Mole, but this does not surprise us as we know that by this time the upper work of this had completely vanished.

The Bight did not last long; already before 1579 the state of the harbour again became critical. Three dangers threatened it : first, the sea showed signs of breaking in at the back, through the bank of shingle which had built itself up

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[1] This appears very clearly in a later plan (pl. xli), where it is named 'Ould Crane Head'.

[2] *Arch.* xi, 244. I shall often have occasion to quote this MS., which, bequeathed to the Society by John Thorpe, is printed in *Archaeologia*, xi.

on the sea side of Clerk's pier, shingle which also formed the root of Thompson's southern pier. On this bank houses had been built, and their safety was imperilled. Secondly, the end of Thompson's pier became completely ruined; and, what was far more serious, the opening left between it and the Mole was so choked with shingle that access to the Bight had become impossible. Dover was thus practically left without a harbour; but there was worse than this, for the projection of Thompson's main pier with its continuing Mole seawards had indeed, as he had predicted, brought about 'slack water without stream or tide of 7 fathoms in the bay', but into this slack water shingle had drifted round the outer end of the Mole and deposited itself right up to the Castle cliff. That this result was due to Thompson's work appears plainly from the report I have already quoted from. 'Before the peere was builte out there are men alive can remember that there were no bankes or shelves of beache to be seene before Dover, but all cleane sea between Archcliff tower and the Castle clyffe,' and the framers of this report go on to show how clearly they had grasped the reason of the change, 'By experience it hath been always found that as the peere was built out so the bankes of beache allso began to growe, and lay farder out as the peere was farder built'.[1]

But for the river this shingle would have deposited itself directly on the shore and thence grown outwards. The flow of the river water, however, prevented this, and brought about the formation of a lagoon which lay between the original shore line and the shingle bank. This lagoon was filled by the river water added to by the flowing tides; as the tide sank the water fell into the sea by channels it cut for itself through the shingle bank, channels which shifted as waves and wind drove the loose shingle this way and that (fig. 4).

Some part of this lagoon, perhaps the larger part, ran with the ebb-tide out to sea through the opening between the Black Bulwark and the ruined Mole, i. e. the space which Thompson had left as the only entrance to the harbour, but this stream was not sufficient to sweep away the ever-growing shingle. 'There is no other entrance or haven mowthe at this presente but sutche as the ebbinge out of the sea water and coorse of the ryver doth keape open,' says the report of 1581. The depth of water at the entrance varied with the strength and direction of the gales, but at times there were not more than four feet of water over the bar.

How hopeless was the state of the harbour at this date is fully shown partly by various documents preserved in the Record Office and partly by the manuscript of 1581.[2] We also have a most valuable plan, happily dated as of

[1] *Arch.* xi, 241.
[2] *Ibid.* 212. The P. R. O. references are State Papers Dom. Eliz. vol. 120: 24, 24¹; 131: 72, 72²; 140: 46. Only the second of these is dated, 1579, but the others are clearly of about the

1581.[1] This was obviously prepared to show the then state of the harbour, and seeing that it bears the arms of Digges, gules, a cross argent charged with five eagles displayed, we may attribute it to him. It becomes all the more interesting when we know that what was ultimately done was his work. This plan shows the depth of water at various points, adding the depth of the ooze which lay below, no doubt with the view of showing the nature of the foundation which would be met with. Moreover, two lines on this plan foreshadow what Digges did when called in to execute the work.

Before this came about, however, many experts were consulted, such as 'sundrie men of experience of that country from Flanders', among whom were
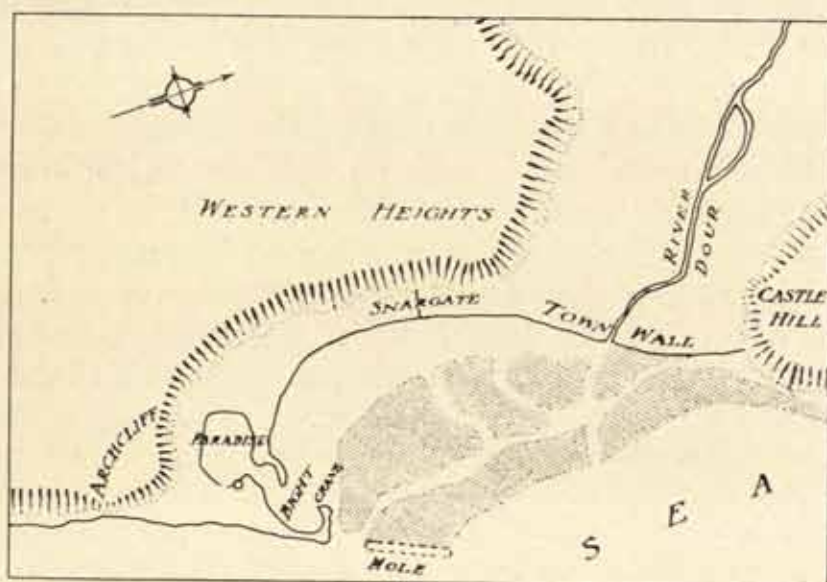
Fig. 4.

the 'scluse masters of Dunkirke and other cunning men of the low countreys'. Jealousy, perhaps, prevented the Flanders 'scluse masters' from being asked for more than advice, for the work was entrusted to three English engineers who followed one another in quick succession. It is during this period, 1579-95, that we have four plans of Dover showing both what was proposed and what was actually done, all of which, so far as I am aware, are quite unknown.

True, the first engineer employed was dismissed before he had done more than make preparations, the cost of which frightened his employers. He was followed by Poins, and it is with his work that I think the first of the plans now to be considered may be connected. This plan is among the records at Hatfield, and I have to thank the Marquess of Salisbury for permission to publish it

same date. Attached to the first is a plan (pl. xl) to be noted later; the second also refers to a plan which is said to accompany it but does not.

[1] Brit. Mus. Add. MSS. 11815 a.

(pl. XXXIX).[1] The only indication of date that it bears is a faint inscription, 'This plan was drawn and coulored by Thos. Miles for William, Lord Cobham,' which places it during the wardenship of Lord Cobham, 1558–97.

My attribution of it to Poins is based on the following considerations. The difficulty to be met was how to deal with the shingle which accumulated between the Black Bulwark and the now submerged Mole, between which lay the only entrance to the harbour. Every one agreed that the only way of doing this was to enclose by walls the river water which formed the lagoon and then to direct its flow through a sluice on to the danger spot at low tide. We know that Poins began by building a work opposite the end of the Black Bulwark, and just inside the western end of the now ruined Mole; now this plan shows a long enclosing wall starting from the Castle cliff just east of where the Dour entered the lagoon and running south down to this work. From half-way down what is now Snargate Street a converging wall runs diagonally from under the Western Heights to join the end of the first wall, and at the junction of the two is a sluice through which the water would pour straight on to the bar. It is further clear that the author of the plan intended to revive and use Paradise, for not only is Paradise shown, but the entrance to it is furnished with a sluice which, when opened, would direct a second stream of water on to the bar. This involved considerable alteration to the Black Bulwark, and the destruction of the Crane pier; both were probably by now so ruinous that there could be no hesitation in removing them. The restoration and continued use of Paradise is easily understood if we remember how difficult it is for the mind of man to turn suddenly to a new idea; no doubt also there were strong vested interests clinging round the wharves of the old haven.

This may have been what Poins proposed to carry out, but all he completed was the work at the end of his proposed two long walls. That this was so is well shown in a later plan (pl. XLI) where this work is shown and marked 'Poyns his first groyne' and 'Poyns his second groyne'.[2]

The next plan we have, unfortunately undated, is due to P. Symans (pl. XL).[3] The system it proposes is, in principle, the same as in the last, but the long wall is much shorter, and returns at right angles to the shore at Snargate Street; it

[1] Hatfield Papers, Maps, i, 58.

[2] The Hatfield plan is further noticeable for one thing, it gives key letters to fourteen well-known landmarks in and around Dover, adding their height in fathoms 'above the ful sea mark'. All these points are well known with one exception—the letter L being explained in the key as the 'Lawles Church'; now on the plan L stands seemingly where was the Templars' Church, whose foundations have recently been recovered and protected. I cannot find this name anywhere else, nor can I in any way account for it as applied to this church; moreover, it goes to prove that at this date the church was still a prominent landmark.

[3] P. R. O. State Papers; Dom. Eliz. 120:24).
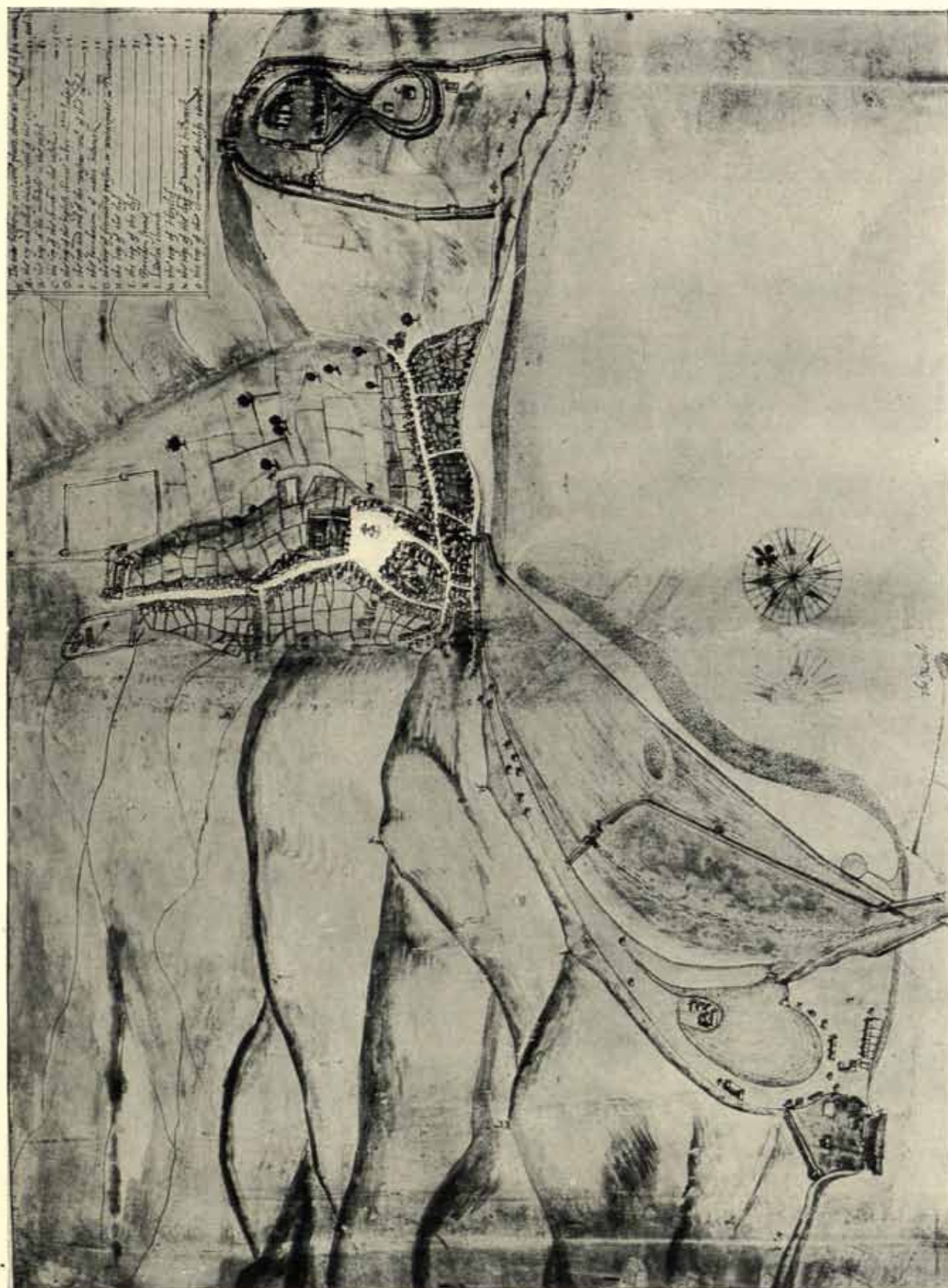
PLAN OF DOVER HARBOUR: by Poins

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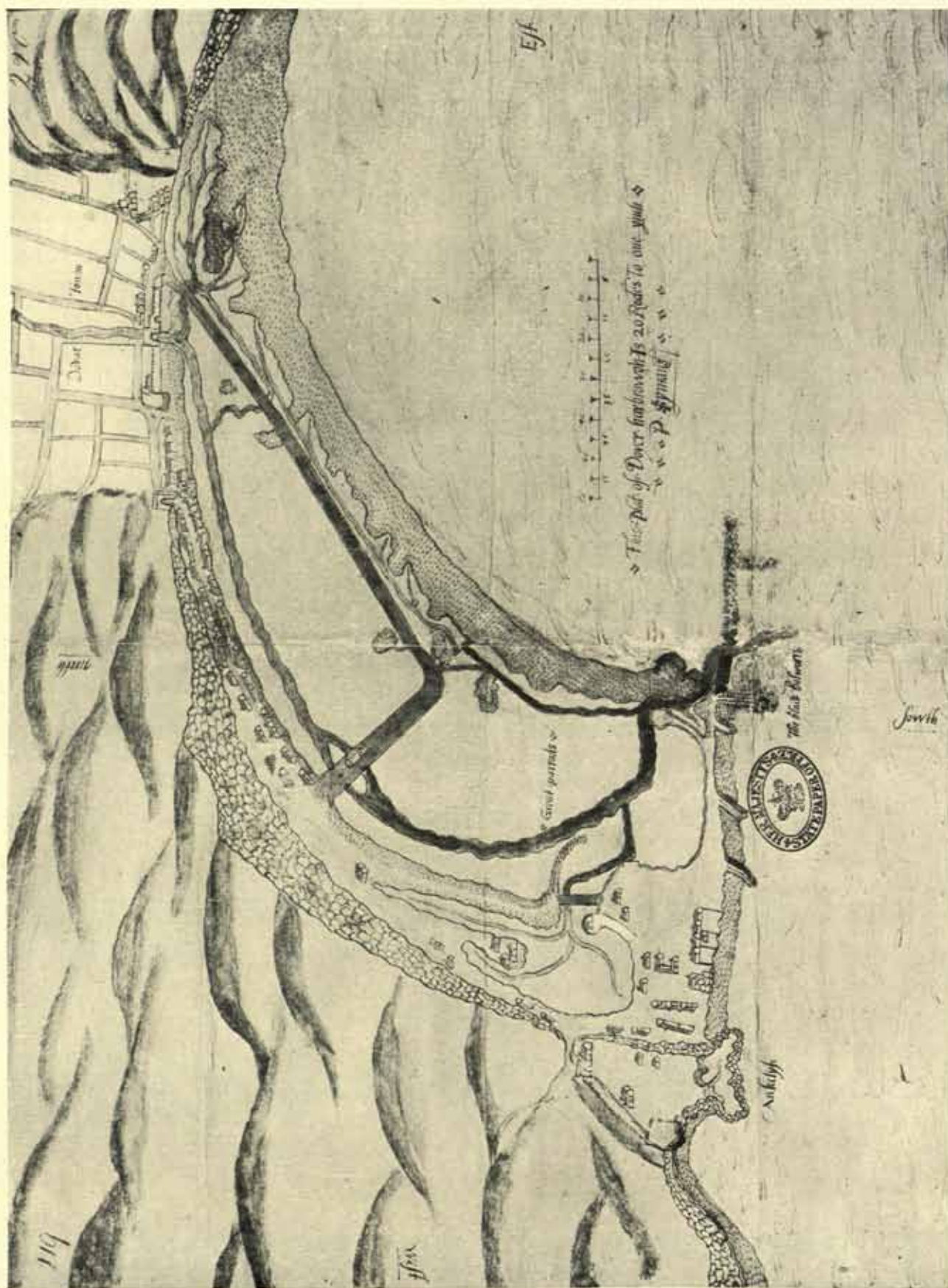
PLAN OF DOVER HARBOUR: by P. Symans

leaves the Black Bulwark and Crane pier untouched, and clearly intends to continue using both Paradise and the Bight. It is especially interesting as showing still existing certain features of the earlier work, for we find Clerk's round Tower, and Thompson's north-eastern jetty, Black Bulwark, and Mole. The space of shingle through which the water was to flow from the proposed sluice to the haven mouth is named 'the Great Parrads', which I take to be a variant of Paradise. Very similar to this is another plan in the British Museum which I do not reproduce as it is already given in *Archaeologia*;[1] there can be no doubt but that this plan was copied from Symans. Both Symans's and the Museum plans show what was actually executed by Digges, the engineer to whose work is due the Dover as we know it to-day, work which we must now follow in some detail.

On Poins's dismissal the work was taken up by Thomas Digges.[2] Interested, as was his father, in many fields of science, Digges, largely perhaps because he was a Kentish man, devoted himself especially to Dover. The report of 1581 on the then state of the harbour, which I have already quoted from more than once, was his work.

In this report he deals not only with the condition of the harbour, and the causes which had brought it to that state, but sketches in full detail the remedies he proposes to apply. His plans, as is often the case with engineer's proposings, went far beyond what was actually done, nor are we surprised to learn that his original idea, as was Poins's, was the improvement and retention of the existing Paradise haven. He proposed, however, to do this in quite a different way. He penned up the water in the lagoon, much as Poins had intended,[3] but his plan then was to lead some of the penned-up water by a new channel running under the Western Heights into the upper end of Paradise. In his cross wall were to be two sluices, the larger one discharging on to the mouth of the harbour, between the Black Bulwark and Poins's new work; the smaller one leading by his new channel into Paradise. Along this channel houses would be built, 'and then would every howse for his own commoditie in respecte of freishe water bee content to bear haulfe charge of trenchinge the chanell where the ryver shall roonne'.[4] After thus serving as a water-supply for the expected houses, the water would enter Paradise at the upper end and keep it full as a floating basin. This was to be ensured by building a 'master sluice' to hold up the water at the entrance of Paradise, which lay not far behind the

[1] B.M. Add. MSS. 11815 *b*; *Arch.* vi, 208. It may be noticed that Symans's 'Great Parrads' becomes 'Great Parade'.

[2] For an account of this distinguished Kentish family see the *Dict. of Nat. Biog.*, s. v. Digges, Thomas.

[3] This enclosure became known as the Pent, and is now the Wellington Dock.

[4] *Arch.* xi, 237.

haven mouth at the Black Bulwark, 'not 20 rodd distante from the only place of perrill to be clensed'.[1]

To allow ships to enter Paradise 'a fludgate or locke there is allso made in the bight adjoyninge to the master-sluice, the whiche shall serve not only to lett in and out all sutche vessells as may passe with marchandize even up to the towne, but allso to penne up the back waters to sutch height that shippes may safely ride a flote fludde and ebbe within'. The idea of a lock was probably a new one in England, for he goes on, 'these kinde of lockes or fludgates are usually in many places of the Lowe Contreis'.[2]

It is not quite clear how much work was intended to be done by the sluice in the cross wall, and how much by the 'master sluice' placed at the entrance to Paradise; from the wording of the report it would seem as though the latter was only intended to be used in emergencies.

The ryver is turned from its old course at the stone bridge [i. e. the Town Wall at Butchery Gate where the Dour entered the Pent] to let him run towards Paradise, it is conveied all along the streets [now Strond Street] under the clyffe, not only to serve all the inhabitants with freishe water but also by the second double sluice, called Paradise sluice, to clense and scoure at all times both parts of the old haven named Paradise, and also the chanell of the newer haven downe to the mowthe, and will reasonably suffice of itself to clense the mowthe and keep it open except by some radge of eastern wynds the beach grows sodainly to a greate banke. Upon enye sutche occasion shall the master sluice be opened, whose violence will be sutch as well in respect of the greate waight of the backwater [i. e. from Paradise], as of the depthe of his faull and of his force enclosed and guyded to the place, and chiefly by reason of the nearness thereunto, that it will teare up and open the passadge though it were clene closed up. And soe no doubt at all of a perpetuall good harboroughe for ever.[2]

The passage is not quite definite in some of its details; it is difficult for instance to grasp what was 'the second double sluice called Paradise sluice', but the main outline of the plan is perfectly clear, and here Lyon, the first modern historian of Dover has gone astray, and has been followed by most if not all of his successors. He regarded Digges's report of 1581 with its proposals as a statement of what was actually done, and gives in all seriousness a plan showing every detail of it.[3]

What seems to have happened is this. The Pent wall and its cross wall were evidently the first and most important part of the scheme, as on these, it was thought, depended the clearing of the harbour mouth, then the most pressing need; and so this was taken in hand first. While this was doing, the truth

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[1] *Arch.* xi, 227. [2] *Ibid.* 228.
[3] *The History of the town and port of Dover*, Dover, 1813–14, Plan VI. This plan is sometimes bound in the first volume, and sometimes in the second.

gradually forced itself on men's minds that nothing could really save the Paradise haven.

Digges's report indeed, when carefully read, proves that he was more than doubtful about retaining the Paradise haven, or at any rate regarded it as the least important part of his plan, for in summing up his proposals he says, 'the turnynge of the river [i.e. the proposed fresh water channel] and makinge of the other sluices [i.e. the sluices which were to pen up the water in Paradise] may be done at leysure', while in another passage he speaks of 'the chanell of the newer haven', thus clearly showing that the idea of a new harbour had begun to dawn on men's minds.

It is, however, certain, notwithstanding Lyon's elaborate plan showing all Digges's Paradise improvements, sluices, and 'freishe' water channel as carried out, that Paradise was given up as hopeless and that the only part of the plan executed was the construction of the Pent long and cross walls with the flushing sluice placed close to the shore end of the latter.

What was actually done is fully set out in the contemporary account preserved for us in Holinshed's *Chronicles*,[1] a record which is no doubt from the hand of John Hooker, who continued the chronicles after Holinshed's death in 1580, and is the foundation of all that has been since written on what was then done. It gives a very fair historical sketch of the earlier attempts to improve the harbour, and describes True's plans and their failure, as also those of Poins who had followed him. Of the latter the writer had no great opinion, 'money was very palpable and plausible to him.'

Of Digges, whose plans were ultimately followed, as of Sir John Scot and the others who assisted him, he speaks with the utmost enthusiasm. He even notes the names of many of the workmen, to whose experience and skill in similar enterprises the success of the works was largely due. The method followed in building the retaining walls was copied from that which had been for long used in saving Romney marshes from destruction, and the skilled workmen were drawn thence. Considering the date at which the work was executed we marvel to-day at the rapidity and thoroughness with which these walls were built, for in little over three months the long wall of 1,980 ft., and the cross wall of 660 ft.[2] with its sluice, were brought up from a firm foundation

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[1] Lond. 1808, iv, 845.

[2] These are the dimensions as given in the *Chronicle*. The nearest contemporary plans we have to check them by are Eldred's of 1641, to be referred to presently, but these two plans agree neither with each other nor with the dimensions given in Holinshed. Moreover, the scales given by Eldred cannot in any way be relied on. Alterations to the Pent since that date, especially the New Bridge of 1800, which has taken the place of Brunyar's Bridge of 1585, make it impossible to check the dimensions with the modern plan with any accuracy. The plan of 1595 (pl. xlii) has no scale, but the proportions of the two walls agree fairly well with the figures given by Holinshed.

to a point above the level of the highest tide. The cost also was far below any of the estimates for rival plans.

The work was carried on under great difficulty; for, at any rate in its earlier stages, it could only be pursued at or near low tide, and before the tide rose again the face of what had been built had to be temporarily protected by fascines. The cross wall, and the laying of the sluice in it, were especially difficult, as here the waters of the Dour were running away continuously towards the outer harbour. This sluice proved the weak point of the work, and already in 1586 had to be rebuilt. Ten years later it again failed and a larger and stronger gate was put in by Lord Cobham (Lord Warden, 1558–97). The undertakers were well favoured by the weather, for any serious gale would have greatly imperilled their work. Lambarde, the father of Kentish historians, tells us what was thought of the success of Digges's work at the time. 'By the industrious attendance of sundrie gentlemen of the countrie and others (put into trust to further the work) a Pent and a sluyce hath been made which both open the mouth and scowre the bottome of the haven, delivering it from that beache that before choked it, and is now (as it is said of a scorpion) converted to the medicine of that maladie which it had brought upon the place in such sort as where before was not foure foote of water a ship of some hundreds may now safely go in and out.'[1]

Digges perhaps never himself realized that the result of his work would lead to the formation of a new harbour, but the two next plans show how this came about. The first (pl. XLI),[2] now among the records of the Dover Harbour Commissioners, can be dated immediately after the building of the long and cross walls with the sluice. It shows us the stream of water concentrated and directed by the sluice so as to flow down to the harbour mouth between Thompson's Black Bulwark and Poins's work, which latter is clearly shown. The old Paradise remains but is called the 'Little Pent', and has been provided with a 'little sluice', which proves that Paradise was still to some extent regarded as a harbour, and the channel leading to it passes round the 'Ould Crane Head'. The new body of water, which was beginning to form what is now the tidal harbour and Granville dock, is here called Paradise. This water space must have begun to show itself as soon as the 'Great Sluice' in the cross wall began its work, and efforts had evidently been made to encourage its formation by one Paul Ives, for we have marked on the plan 'Ivies' first groyne' and 'Ivies' second groyne'. His work survived in a ruined condition

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[1] *Perambulation of Kent*, London, 1596, 148.
[2] This plan (pl. xli) can be most usefully compared in every particular with that of 1595 (pl. xlii). It can be safely dated as between 1584 and 1592, and is one of the most instructive plans remaining of that crucial time in the history of the harbour.
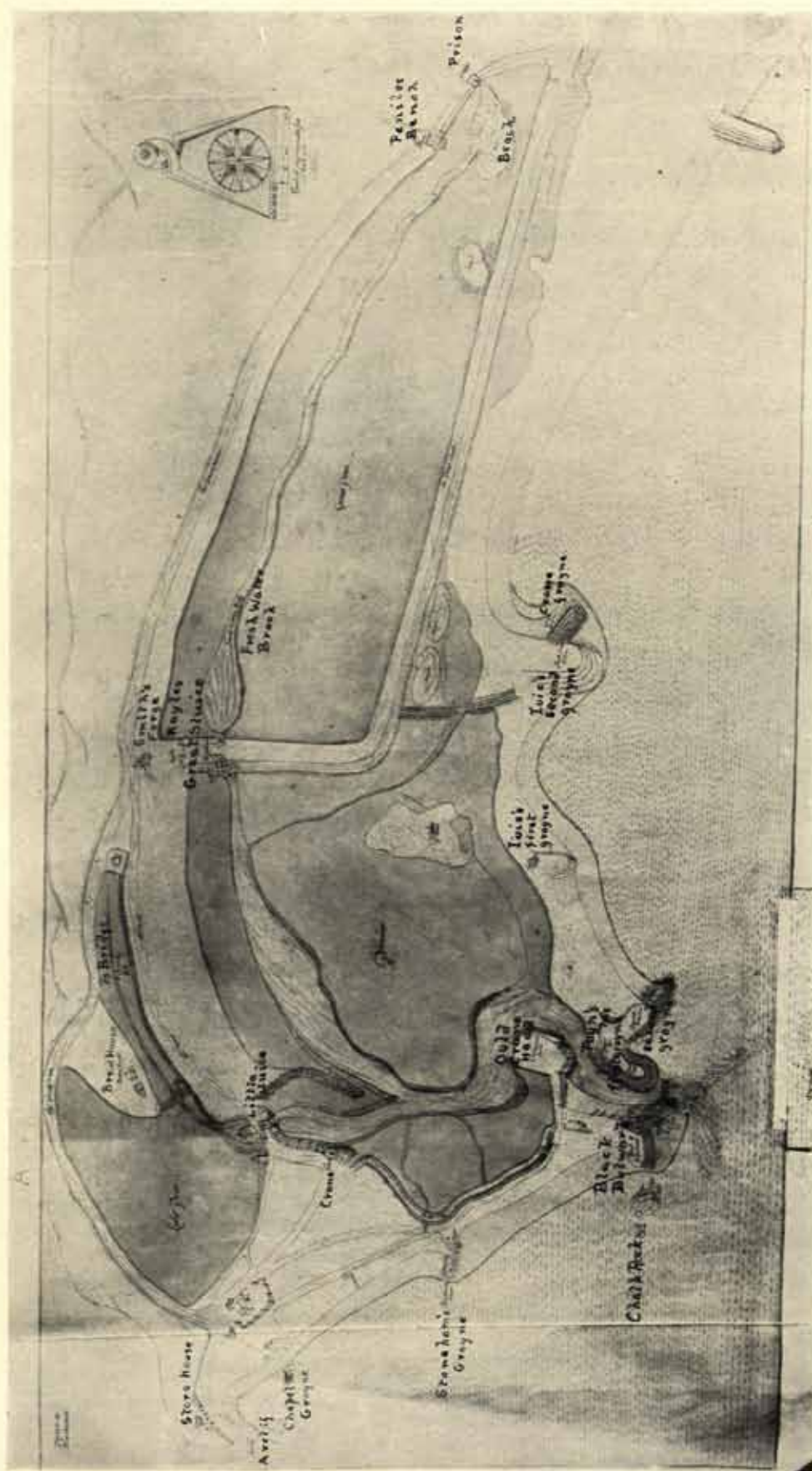
PLAN OF DOVER HARBOUR BETWEEN 1584 AND 1592
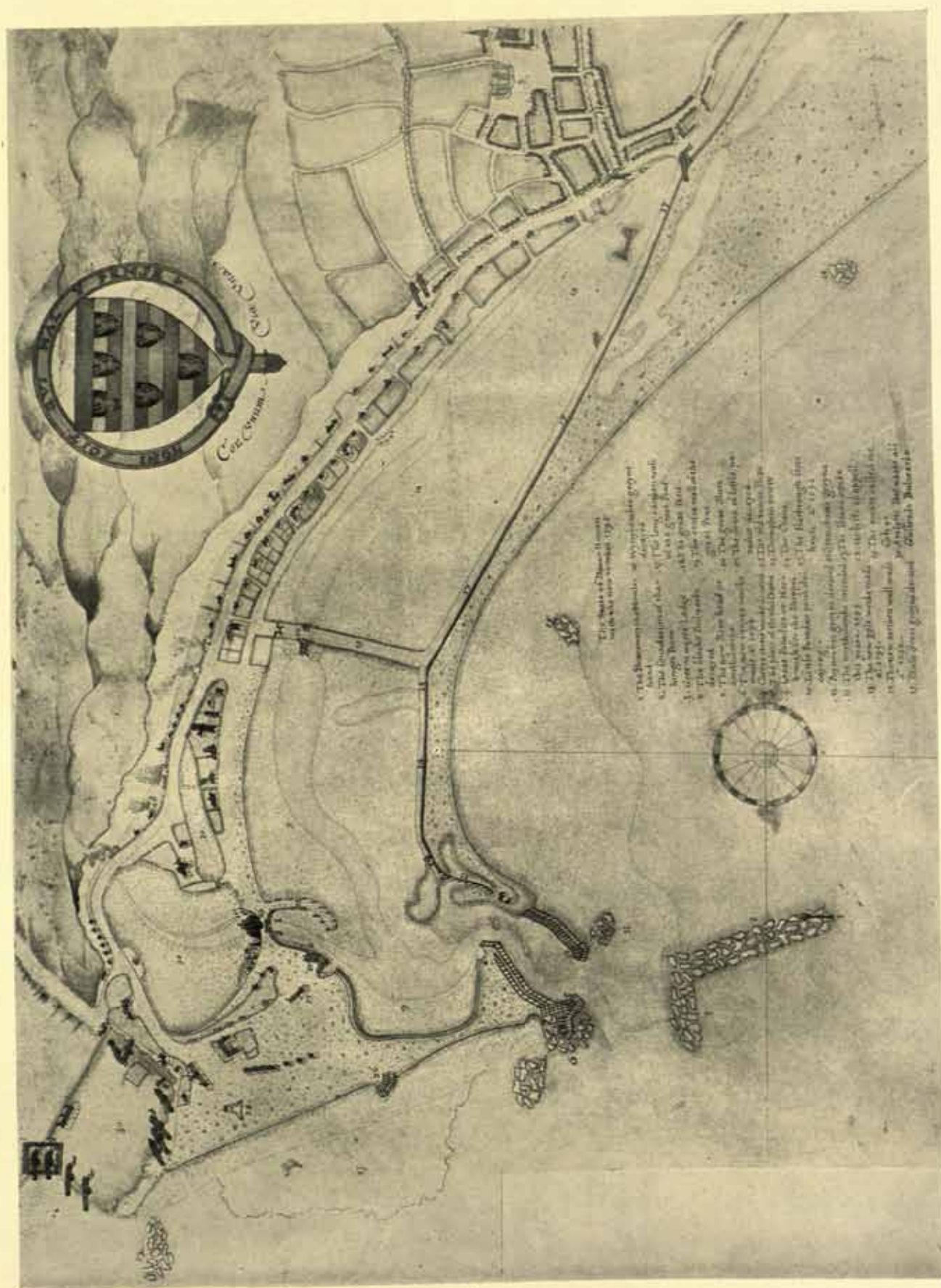
PLAN OF DOVER HARBOUR IN 1595

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until 1595, when we shall find his 'second groyne' on the plan of that date 'decaied'. East of Ives's work is a 'Crosse groyne', of which there is no trace in 1595, and a little farther along is the 'North groyne', which does show in 1595 as Wynybanckes's groyne and is also decayed.

The submerged Mole is well shown, running out from the end of the Black Bulwark. There are many interesting letterings on this plan, and we find for the first time the name Great Pent applied to the space enclosed by Digges's two walls, now known as the Wellington dock.

But the crown of Dover plans at this period is the one dated 1595. Found by the late Mr. Prescott of Dover, it is now in the possession of his son (pl. XLII).[1] It gives us 'the state of Dover haven with the new workes 1595'; but first as to what we recognize of the old. Clerk's round tower is there (23), though attributed in error to Thompson. Thompson's curved pier protecting the entrance to Paradise is called the 'old towne piere' (22); the Black Bulwark is shown 'decayed' (4), and its place is taken by the 'new squyre [square] work made 1594' (6), which has a 'new piere head' (5). The Mole is called 'the foundation of the Kinges piere' (2), a part of it being 'Greenewayes ledge' (3), and exhibiting a beacon (1) on its south end, which we shall meet again later. Digges's great work, the 'long earthen wall of the Great Pent' (17), and the Cross Wall (19), with its sluices (20), are as in the last plan, but the space between the sluice and the harbour mouth has now evidently become the harbour, for 'Little Paradise' the old harbour is 'decaying' (10), and the sluice which gave access to it is 'decayed' (21), while to remove all doubts the newly formed area is plainly called 'Great Paradice' or 'Harbour for Shippes' (9). This new harbour has had to be protected on the south and east by 'the new earthen wall made 1592' (14), continued by 'the new pyle work made 1593' (13), and is meant to be yet more protected by 'the north jambe intended this yeare 1595' (12), which last work would occupy the place of Poins's groyne which is here 'decaied' (11). Digges himself died in the very year of this plan and one cannot but think that as the report of 1581, showing what might be done, was his, so also in this plan of 1595 does he show us what he has achieved. All unconsciously yet none the less he is the founder of modern Dover, for the Wellington and Granville docks and the tidal basin are all the result of his work, and without his Pent wall, Dover would have lacked its esplanades and Marine terraces, now the foremost attraction to its visitors.

One of the strong arguments used by Digges in his advocacy of the improvements he proposed had been that they would lead to building on the land which would be thus gained and protected from sea inroads, and the event almost at once justified the foresight.

[1] The numbers in the text are those on the plan.

Up to the date of the enclosing of the Pent the town had stopped at Snar Gate. Beyond this, under the cliff, were perhaps a few fishermen's huts, and on the wider space lying between Paradise and Archcliff a few more; Snargate Street and Strond Street did not exist, and a mere track-way over what must have been a narrow shelf of beach led out from Snar Gate to what is now the centre of the railway and shipping activity of modern Dover. All this tract of land was rendered safe by the new works, and its importance for purposes of development was at once grasped, for, as this plan shows, already by 1595 houses had spread from Snar Gate as far as the upper end of the Old Paradise, and ten years later, by the intervention of the Crown, acting through the Earl of Northampton (Lord Warden 1604–14), the whole of this land was handed over to a body of Commissioners. This was in 1606, and already by 1641 it had all been taken up on lease, from the granting of which the Commissioners derived a considerable income.

The best evidence of this rapid growth of Dover to the south-west is the fine plan of the harbour now in the keeping of the Dover Harbour Board. Hitherto unpublished, this plan is the foundation of our knowledge of what is called the Pier District of modern Dover; and first as to its date, which can be fixed with great certainty. On a groyne called 'Pouprit's Head' which juts out into the bay from the Pent wall is written, 'The newe Head made in A°. 1638', and the general plan bears the arms of the Earl of Suffolk, who was Lord Warden 1628–40. This would lead one to place it between 1638–40, were it not for the dedication to the Duke of Richmond, who succeeded as Lord Warden in 1640.

The part played by Dover in the Civil War makes it very unlikely that any such dedication would have been penned after 1642. We may therefore safely conclude that, begun during the Earl of Suffolk's tenure of office and intended to be dedicated to him, the plan was completed during the two years in which his successor was *de facto* Warden, probably in 1641, the year I have assigned to it. This date gains confirmation from the short notice of William Eldred, the author of the plan, to be found in the *Dictionary of National Biography*. The writer of this was not aware of this map, but he tells us that Eldred had spent the greater part of his life in Dover Castle, and having been a gunner for sixty years, published *The Gunner's Glasse* in 1646, being then eighty-three years of age. If my attribution of the date 1641 to the map be correct, Eldred, who in its dedication speaks of his 'time in this world being now at an end', would then have been seventy-eight years of age. A scientific gunner is extremely likely to have been a good surveyor, and this, coupled with the coincidence of age and residence, clearly identifies our Eldred with the author of *The Gunner's Glasse*.

His object in producing the map is best gathered from his dedication, which is addressed to the Duke of Richmond and 'to the rest of the honerable the Commissioners of Dover Harbor'.

Forasmuche, he goes on to say, as frome the first grante of these harbor lands I have been imployed in mesuringe and plattinge all thes lands being commanded at the first sitting of this Honble. Sessions to measeur and make platts of etche man's severall grounde which I have carefully observed unto this presente, and that now I have lived by God's provydence to se all thes lands granted in lease, I have carefully collected all thes platts as well as the gennerall platt of Dover harbor, the towne and castell, as allso every man's severall ground into this booke beginning at the antient gate of Dover called Snargate and so allonge under the clieffe to Archlieff Bullwark, and from the clieffe to the lowe water marke of the seae with every man's name that owneth the grounde, the number of ffoots conteyned in etche platt in lengthe and breadthe, howe it boundethe uppon on an other, and howe it is situate toward the southe or northe, withe the name of the strete where it lyethe. Which booke I heare presente unto all this hon^ble Sessions whiche nowe are and allways have been so carfull for the benefite of the harbor, to the intente it may remayne to sucedinge ages, whiche will then be in more use then itt is nowe. And thus recomendinge this my worke and paynes to your wise and honerable considerations, my tyme and labore in the world being nowe att an end, with my humble and hearty prayers to God for the health and prosperity of my lord duke's grace and the reste of this hon^ble Sessions I humbly reste att your service to be comanded.

WILLIAM ELDRED.

The dedication is as charming as the plan is perfect. The old man, for the shaky handwriting confirms his statement, must have devoted years to this labour of love. His technical skill may fail in one or two directions, but he has left us an invaluable record of the new Dover which had grown up between 1584 and 1641. He gives on one sheet a general plan extending from the Castle to Archcliff and inland as far as the Maison Dieu and the Priory. The harbour portion of this general plan is then reproduced on a very much larger scale on five sheets each, the same size as the general plan; and here a word must be said as to the scale on which these two plans are drawn. The general plan has on it a rule scale showing 100 units, under which is written 'The scale is 20 rode to one ynche'; this is therefore a scale of $\frac{1}{3960}$. The enlarged plan has no rule scale, but written outside the margin of one of the sheets, in a very small hand is '48 to one ynche', which can only mean 48 feet to an inch; this gives a scale of $\frac{1}{576}$, which is considerably larger than that of the largest modern Ordnance survey ($\frac{1}{1250}$). The large plan, however, is not plotted with any close regard to its scale, as can easily be tested seeing that the dimensions are set against the boundaries of each plot. In a rough way, however, the details of the plotting are fairly accurate, but if we attempt to lay down the five sections of this large plan on a single sheet the result is hopeless. Its sheets overlap where they join, some

more, some less; this of course would not matter, as one could meet it by omission in redrawing the map as a whole, but any attempt to do this shows that the five sheets, however correct each may be in itself, pay little or no regard to the true lines of the streets and boundaries of the town. A first attempt to place the five sections on a single sheet brought the harbour wall right across the mouth of the harbour. A good example of the want of accuracy with which the streets are laid down is found in comparing the second sheet with the third. These overlap considerably, and both give the Cross wall and Strond Street; on the first the angle of these is 100°, while on the second it is laid down as 120°.[1] In my reproduction of the five sheets forming the larger plan (pl. XLIII) I have taken the lines of the streets and the boundaries from the modern Ordnance survey ($\frac{1}{1250}$), filling in the details from the old plan.

The five sheets are not only on a far larger scale, but they also cover much less in extent than does the general plan. The town within the walls is omitted altogether, and the plan begins at what was then the north-eastern end of the Pent, where was a sluice and a bridge called Brunyar's Bridge. Between this point and Snar Gate it gives us only Butchery Gate[2] with the river Dour, which here ran under the town wall into the Pent, and an important house, having a large garden attached to it, lying between Snargate Street and the Pent. Snar Gate[3] is shown, spanning the street to which it gave its name, and is the real starting-point of our plan, for from thence onwards every plot is given,[4] the holder's name inscribed in it, and the dimensions of all its boundaries set against them. Written close to Snar Gate is this inscription:

At this ancient gate called Snar gate beginneth that memorable grant of these harbour lands whiche lands were given by King Jeames to the Right Noble and H° Earle of Northampton who freely gave the same for ever to the use and mayntaynance of Dover Harbor in Anno 1605.[5]

South-westwards the plan continues as far as Archcliff, and between this, the Western Heights, and the sea, it shows the Pent with the long and cross walls which formed it, and the two sluices in the latter. Paradise, evidently disused, appears; and the new harbour is again honestly called 'The Harbour for shipping', as it had already been in 1595. The entrance to this is formed by the two jetties, the north, Poins's groyne as it had first been, the south, the 'new

[1] On the Ordnance map it is 106°.
[2] Taken down in 1819.
[3] Taken down in 1683.
[4] On the large plan these plots are not shown as built on, probably they could hardly be, but on the general plan houses are marked along the course of every street. A few even appear on the seaward side of the Pent, where the York Hotel stood later.
[5] *Sic*, but the date of the Charter is 6th October 1606.

East Brook Water

Brungates Bridge

The River Called Antiently By the name Dower

or Pouprits Head

The Bowling Place

The Newe Head Made in A° 1638

TE MAYNE SEAE

The Moule Rodd

The Northe Head

The Southe Head

THE GREAT PENTE Conteyning 16 acres of Ground

Wall of the Great Pent

The Great Pente Wall Strete

The Cross Pente Wall Strete

The Harbor Wale

The Boome

Hamons Head

Stonhams Head

The Harbor Wall or Strete

THE HARBOR FOR SHIPPINGE

The Newe Strete

The 2lieffes

Snargat Strete

The Comon Place

Snargat Strete

Lime Kill Strete

Straunde Strete

Assbey Strete

Councell Hous Strete

Rounde Tower

The Chapel

Archeff Head

THE PARADIS PENTE

Archeff Strete

ELDRED'S PLAN OF DOVER HARBOUR, 1641

squyre werk made 1594', to replace the Black Bulwark. Just outside the north
jetty the remains of the Mole are shown as rocks, with a beacon to mark them
named 'the Moule rodd'; proof that they were still then a danger to navigation,
lying as they did at the very entrance to the harbour.

The most remarkable thing about this plan is its evidence of the rapid
growth of the Pier district of Dover since the completion of the Pent enclosure
in 1585. Only fifty-six years had elapsed, and we have laid down and named
practically all the streets in this district as they are to-day; Snargate Street
becoming Lime Kiln Street at its southern end, Strond Street beginning at the
Cross wall and running down to where Paradise entered the new harbour, Arch-
cliff, now Bulwark Street, encircling Paradise on the west.

Paradise is enclosed on all sides except for a very brief space on the north-
west, and for its narrow mouth where it is spanned by a bridge which joins the
ends of Strond and Round Tower Streets. Between Paradise and the sea we
have then as now Round Tower Street, with Clerk's tower which gave it its name
still standing, Council House Street, both of these running into Crane Street
(later Clarence Place, and not to be confused with the old Crane pier). Next is
Middle Row, still so called, and then Assher Street, which by 1737 had become
Fisherman's Row, and is now Seven Star Street. Between this and the sea a row
of plots is shown, beyond which lay in modern times Beach Street, fronting on
the South Eastern Station, the growth of both these latter proving how much
the sea has receded at this point.

The harbour side of Crane Street is occupied by seven sites, ground now
covered by the goods wharf of the railway. The back of these sites looked out
on to what had been known as the Bight, which, as we have seen, had formed the
first beginning of the new harbour; this space was enclosed on its north side by
the inward projection of the south jetty. From this inner jetty head, across the
navigable channel, a boom swings out towards the north jetty and a capstan is
shown on the pier deck, from which its movements could be controlled. I have
never met elsewhere any mention of this defence, but it is clear that this must
have been its purpose. On the sea front of the beach, running from the south
jetty to Archcliff fort, three groynes are depicted named Hamon's,[1] Stoneham's,
and Archcliff.

Close to Archcliff groyne is marked 'the Chapel'; here had stood in old
times the small chapel of our Lady of Pity,[2] but the name on Eldred's plan
would seem to have been a survival, since Lyon says that it had been washed
away by the sea in 1576.[3] These groynes were the successors of those we have

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[1] Probably named from Sir Thomas Hamon, deputy warden 1615-20.
[2] This chapel is shown on most of the plans.
[3] Vol. i, 193.

noted on all the earlier plans, and were meant to prevent the accumulation of shingle at the mouth of the harbour, a task which, as Digges had discovered, no groyne could ever hope to perform. 'True it is,' he had said in 1581, 'the abundance of beache is sutche that is carried with the fludd as by noe groynes it is possible to be stayed, and therefore no contending by force with an enemye so puyssante.'[1] Yet though the fact had been recognized, the lesson had not been learned, and the shingle continued to pass on, as we shall see later, to form a bar at the harbour mouth, whence the stream of water directed on to it from the Pent at low tides was unable to dislodge it.

Let us turn now to the Pent. The long wall which enclosed this on the seaward side started much nearer the Castle than the Wellington dock now extends in this direction, for the upper end of the Pent has been filled in and built over. The wall did not quite touch the old shore line, but was joined to it by a bridge called Brunyar's Bridge and a sluice, through which, possibly in time of river flood, some of the Pent water escaped to the sea under the Castle cliff. This outlet is named 'The East Brook water'. From this point the wall ran straight, diverging outwards, as far as the cross wall which left it at right angles to run back to the line of Snargate Street. We know from later sources that weakness of this wall was a constant source of anxiety; more than once the sea threatened to break in, and it was many times strengthened, and in this plan is a feature which one cannot help connecting with this weakness. Projecting into the Pent from the long wall is a semicircular wall, which, butting at each end against the long wall, seems designed to act as a buttress, or even a second line of defence at this possibly specially weak point of the wall it thus helps to support. This semicircular work is lettered 'The crooked wall of the Great Pente'; the description is an odd one, though not wholly inapplicable. In the next plan we have, of 1737, there is no trace of this work, which by the consolidation of the beach on the sea side of the long wall had probably by that time become needless. This consolidation had no doubt been helped by the construction of Pouprit's groyne in 1638, above referred to; for this lay immediately behind one end of the semicircular work, and against this no doubt the beach banked itself up.

The cross wall as made in 1585 was, so Holinshed tells us, but 50 ft. wide at the top, rising from a broader foundation of 90 feet. By 1641, however, it had evidently been much widened, for on the Pent side, all along it, are shown plots 20 ft. in depth, and on the harbour side similar plots 60, and some 80 ft. deep.[2]

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[1] *Arch.* xi, 227.

[2] The present width of this wall is 152 ft.; no doubt making up its sides as quay walls, as they now are, has added considerably to the width.

At the shore end, close to the end of Strond Street, were two sluices [1] through which the waters of the Pent were discharged into the harbour. These are shown as an erection of two towers on the harbour side, and two small houses on the Pent side. The tops of both walls had by this time become streets, and are named 'Great Pent Wall Street', and 'Cross Pent Wall Street'. [2]

In 1585 nothing had been done beyond the making of these two walls, and the space which lay below the Pent cross wall was only protected on the sea side by a bank of shingle; this must have proved insufficient, for our plan shows a further wall, built, so Lyon says, in 1592; [3] this, starting from the angle at the junction of the long and cross walls, ran towards the north jetty. This wall is called 'The harbour wall', and has on each side of it two very large plots, both marked as being held by Jacob Braemes. The plot on the sea side is 400 ft. in length along the wall, 250 ft. at the jetty end, tapering to 20 ft. at the north end. The plot on the harbour side is of the same length by a uniform width of 240 ft. This inner plot became a little later the site of the 'New Buildings'. [4]

Lying between Jacob Braemes's inner Harbour wall site and the cross wall is a site 200 ft. by 60 ft. marked 'the place for the dock, used for the building of shipps', and this it remained until it was thrown into the harbour as part of the enlargement of 1838.

On the sea side of the Pent long wall, running north from its junction with the cross wall, nine plots are marked extending along it for a distance of 564 ft. These plots do not seem to have been built on until the beginning of the nineteenth century, up to which date, with one or two exceptions where the cross wall came on to the long wall, the whole of this foreshore was occupied only by rope walks. One other space (198 ft. by 120 ft.) however is shown on the plan, as enclosed by a wall, having a gate in the centre and four small buildings at the corners: this is called 'The Bowling Place', but I find no other mention of it; later it became the Ordnance yard.

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[1] Digges had put in one sluice, and this was rebuilt in 1597. One was probably found insufficient, and a second had been added. They are distinguished on the plan as the Old and the New.

[2] This name became later 'Snargate Street over the Sluice', and later still 'Union Street'.

[3] This is confirmed by the plan of 1595 (pl. xlii and cf. p. 201).

[4] Jacob Braemes also occupied a site on the opposite side of the harbour, at the north end of Strond Street, next to which lay a site held by Arnold, his son. They were a family of foreign origin and must have held a very prominent position in Dover at this date and for many years afterwards. Jacob we first meet with in 1621, when he was a Customer of Dover. They do not seem to have been members of the foreign church which existed at Dover at this date, at least their names do not appear directly in its registers, but they evidently were in close relation with its members, for Arnold is spoken of as landlord of the premises in which the church met in 1659, and in 1646 and 1647 his wife Margaret acts as godmother, and he himself in 1660 as godfather, at baptisms which took place in the foreign church in those years.—*Registers of the French Church at Dover*; privately printed by F. A. Crisp, 1888.

If I have devoted considerable space to this plan it is for the reason first that it has never yet been mentioned in any account of Dover; secondly, that it is the connecting link between the future and the past; for, looking forward, we see Dover outside the walls as we know it to-day. We find in it the jetties of to-day with the tidal harbour which lies inside them, the Pent, which was to become the Wellington dock, the foreshore of the long Pent wall, now the Esplanade and sea front, and the streets which lead out under the Western Heights from the old Snar Gate round to the Pier; while if we look back to the past we still have Clerk's Round Tower, Paradise, no longer a haven but not yet built over, and Thompson's south jetty with its groynes first built to shelter the entrance to Paradise. Dover may well be proud of having such a perfect record of its middle state as that left to it by William Eldred.

Dover now had a new harbour, but the old trouble still remained, for shingle still accumulated at the entrance of the jetties. It had been hoped that the rush of water from the Pent would have sufficed to sweep this away, but the sluice was too far away, and the course of the water through the harbour was not straight; by the time the rush of water reached the harbour mouth it had spent its force. To remedy this a new wall, also called the cross wall, was built in 1660; this stretched from the corner at the southern end of Strond Street north eastwards to the opposite corner of the plot inside the harbour wall, which, as we have seen, in 1641 belonged to Jacob Braemes. In the centre of this an opening was made which was both nearer to and more directly opposite the harbour mouth, on which therefore the rush of water was delivered with greater force. Into this inner basin the waters from the Pent first passed, while it also served as a floating dock into which ships were admitted at high tide through a single pair of gates placed in the central opening. There must also have been sluices in this cross wall, for it would have been impossible to open the gates the moment the tide fell even an inch below the level of the water in the dock.[1] In after years, as we shall see, when the tidal basin was increased in size, this cross wall was prolonged and joined up to the Pent cross wall, as it is to-day; meanwhile its erection formed for the first time the enclosure now known as the Granville dock.

In 1676 we have the report of a Commission appointed to ascertain the limits of the Port of Dover.[2] Coming, as it does, so soon after the plan we have been considering, this is a most valuable document topographically, as we are able to make it accord with the plan very exactly. With the limits of the port on the sea side we need not concern ourselves; they run south from the Goodwin

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[1] There is no contemporary evidence as to the exact arrangements of this cross wall at the time of its erection, but we know from Perry's report that a gate existed in 1718.

[2] P. R. O., Ex. K. R., Special Commissions, 6266, m. 4.

Sands to a spot off Eastward point a mile from the shore and an equal distance from Folkestone. The delimitation of the actual harbour begins at the 'head of Dover pier', which I take to be the south jetty, 'and so in at the said pier west-north-west up to the bridge that leadeth over the sluice', i.e. the sluice in the Pent cross wall. The report then goes on to name the wharves or quays at which goods might be laded or discharged. Unfortunately it makes no mention of the cross wall of 1660, which would have been an admirable guide, but confines its description to posts and compass bearings. The first quay, Crane quay, is 30 ft. long 'beginning that length from the crane,' and so directly west-north-west to a post placed as the limit of the said quay'. It is further said to be bounded by the Harbour Sessions House on the south-west-and-by-south and the haven north-east-and-by-north. The Sessions House, where the Harbour Commissioners sat, stood at the south-east corner of Council House Street; this fixes the position of this quay as being close to the point whence the cross wall of 1660 started; lying a little to the east of what had been the entrance into the old Paradise, it formed part of the southern side of the outer or tidal basin, what is now the railway goods wharf.

The next quay, of 55 ft. in length, is called James Hamond's, 'beginning at a post placed at the south-west-and-by-south end of the said key, and so north-east-and-by-north to where another post is placed'. It is bounded by the house of the said James Hamond on the west-north-west, and by the haven on the east-south-east. Though we are not told so, we have now passed to the new inner harbour formed in 1660; Hamond's house must have been on the harbour side of Strond Street, and his quay formed a part of what is to-day called Custom House quay.[2]

Next comes a quay 657 ft. in length belonging to several of the inhabitants 'beginning at a post fixed at the south-east end of the key called Barnicles key and so along the several keys to a post at the north end of the key called Major Braemes's key, in breadth at the south-east 24 ft. and at the north end 36 ft., bounded with several dwelling houses on the south-west [i. e. the houses fronting on to Strond Street] and by the harbour towards the north-east'. This series of quays occupied the greater part of what is to-day Custom House quay, and brings us up to the break in this side of Strond Street through which the tramway now runs from Snargate Street on to Custom House quay. Braemes's quay was the northernmost of this series of private quays and no doubt lay in

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[1] This is not the crane which had stood on the inward prolongation of the Black Bulwark, but another situated on the ground now occupied by the railway goods wharf, in front of Clarence Place, then Crane Street.

[2] Thirteen sites are shown in the plan of 1641 on this, the harbour side of Strond Street, with all the occupiers' names, but Hamond is not among them at that date.

front of the two sites held in 1641 by Jacob and Arnold Braemes which had a frontage to the harbour of (Arnold) 105 ft. and (Jacob) 88 ft. respectively. Arnold, as we have seen, was Jacob's son and no doubt the Major of 1676, by that time owning both houses; if so his quay would have been an 'important one, covering 193 ft. of the 657 ft. belonging to the 'several inhabitants'.

In 1676 there was at this point a break of some 120 ft. in Strond Street, 'The Common Place', into which a small recessed dock ran;[1] between this and the Pent cross wall stood another block of four houses. Beginning at the north-east side of the 'Common Place', fronting on the dock in part and in part on the harbour, lay the next quay 'beginning at the west side of Matson's warehouse and so directly west 45 ft. [this from the bearing given must have fronted on to the dock] and from thence directly north 35 ft., bounded by the haven towards the south and the bridge over the sluice towards the north-east'. None of the owners of this block in 1641 was a Matson and he must therefore, as had Hamond, have come in as occupier at a later date. The harbour front of this wharf was only 35 ft. long, though the total harbour frontage of the block was 221 ft., but the proximity of the sluice must have prevented more of this frontage being used for quay purposes.

The next quay carries us across to the other side of the harbour. Here the Pent cross wall formed a right angle with the long wall, which latter had been carried on southwards from the angle as the Harbour wall. On the harbour side of this prolongation, beginning from the Pent cross wall, came in 1641, first the space of 60 ft. reserved for a shipbuilder's yard, then a site of 60 ft. held by Thomas and William Dawks, and then the large area occupied by Jacob Braemes with a frontage of 400 ft. to the harbour.[2]

It was on this latter frontage occupying part of its 400 ft. that lay the last quay mentioned in the report, 'called the New Buildings Key being in length 276 ft. beginning at a post at the north-east end and so directly south-west to the end of the said key, in breadth at the south-west end 51 ft. and at the north-east end 43 ft., bounded with several warehouses belonging to Arnold Braemes towards the north-east and the haven towards the south-west'.

We may assume from this that Jacob Braemes the father was now dead, and had been succeeded by his son Arnold. The situation of this wharf is quite clear, the difficulty is to understand its name, for the 'New Buildings', well known in Dover, undoubtedly stood on the Braemes property in Strond Street, on the opposite side of the harbour. This can be proved from the records of the foreign congregations which existed at different times in the town. The

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[1] This dock was later occupied as part of the Navy Victualling Yard, but it vanished when the quay line was made continuous in 1871.

[2] Pl. xliii.

third of these congregations which existed from 1644 to 1667 was in 1659 paying rent to Arnold Braemes [1] for the premises it occupied, and what these premises were we learn from the records of the succeeding congregation (1685–1731), which tell us that the church 'fut rétablie dans le même lieu appellé le New Buildings'.[2] These 'New Buildings', erected it would seem about 1645 by one of the Braemes, stood on their Strond Street property, and the name lived on with the house until 1806 when it was taken down.[3]

We have then two 'New Buildings', facing each other on opposite sides of the harbour; the word 'New' as a name is always misleading, for time ever makes it a misnomer, nor can one say more in explanation of this twofold use of the name than to point out that both buildings were erected by the Braemes on their land, both were new at their building, but which came first we cannot now determine. Certain it is that the name died out on the east side of the harbour, indeed this report of 1676 is the only instance known of its use there, whereas on the west side it survived till 1806.

Digges's foresight as to the development of building which would follow on the execution of his plans was more than fully verified, for well within one hundred years the whole of the Pier district had thus sprung into existence, while round the new harbour stretched eleven hundred feet of wharves. His prediction that the new harbour would be free from the fate of all its precursors was not so happy. The shingle still drifted steadily from the south-west, to drop quietly in the mouth of the harbour, nor was the rush of water from the Pent sluice, nor even from the new inner basin, sufficient to deal with it effectively.

We have the strongest evidence of this in a report made to Charles II in 1682 by Sir Henry Shears;[4] in this he says that the port had 'become entirely useless, the pier within being filled and choaked up with sand and mud, and the

[1] *Huguenot Society, Proceedings*, iii, 296.

[2] *Ibid.* iv, 100.

[3] Lyon, *op. cit.* i, 148, says that at that date the Strond Street 'New Buildings' were used as the Custom House. He dates their erection as in 1662, but is here clearly wrong. He adds, 'they', i.e. the Braemes, 'had a grant of the beach on the opposite side of the basin on which they erected a square pile of buildings for storehouses. They were then in the expectation of Dover being made a free port.' He is here referring to the two large blocks of land held by the Braemes on the east side of the harbour, on one of which were the 'New Buildings' of 1676. These warehouses survived until 1808, when they were burnt down. At that time they were known as the 'Old Buildings'. This suggests a simple and not altogether improbable explanation of the difficulty noted above, that is that 'New' is used in the report of the Commission in error for 'Old', and that in 1676 they were really known as Braemes's 'Old Buildings', in contradistinction to his newer buildings on the opposite side of the harbour. Even reports of Commissioners are not impeccable.

[4] Quoted in Worthington's *Proposed plan for improving Dover Harbour* (Dover, 1838), from the Harbour MSS.

depth of water lost: that there was a bank of beach at the mouth of the harbour of many thousand tons, which barred up the entrance'. He goes on to describe the derelict state of the town, 'where half the houses had bills on the doors' in consequence of the stagnation of trade resulting from the condition of the harbour.

Things were in this state when in 1718 an acknowledged expert, Captain John Perry, was called in to advise. His report is to be found printed at the end of the 'Account of the stopping of Dagenham breach';[1] his success in dealing with this disaster to the Thames estuary being the foundation of his fame in such matters. Like his precursors, he recognizes the cause of the trouble as due to 'south-west winds which cause a great drift of shingle to sett along the shore, which lodges before the peer and choaks up the mouth of the harbour', and he points out that though this does not happen so often as it is reported, yet the apprehension of it deters ships from attempting to put into such a port; in addition to this general drawback, he enumerates certain other inconveniences inimical to shipping. These are of interest as throwing light on the then condition of the harbour. First, the tidal basin between the cross wall of 1660 and the piers is left at low tide for the most part wholly dry. Second, at the entrance into the inner basin there is not above 10 ft. of water at a neap tide. Third, there is less depth of water in the inner basin than at the entrance. Fourth, the inner basin is too small. Fifth, the newer cross wall is so badly planned that it will not hold sufficient water, and when this water is required for scouring away the bar from the mouth of the harbour, the ships in the basin are left dry on the ground. Sixth, the entrance into the basin is through a single pair of gates, so that ships can only enter it at the moment of high water. He then goes on to propose his remedies; these are very much what his predecessors had done, and would, had they been carried out, have proved as futile. To prevent the shingle drifting up to the mouth of the harbour he proposes several low narrow groynes to the south-west of the harbour, against which the shingle would bank up, as no doubt it would until they were full. To prevent any accumulation at the harbour mouth, the south jetty was to be carried at least 150 or 200 ft. farther into the sea. He was sanguine enough to add, 'I believe the harbour will be thereby freed from being choaked up any more for ever'.[2]

For improving the interior of the harbour he proposed to double the size of the inner basin by building a new cross wall in front of the existing one. The entrance into this was to be by a lock, which would allow ships to enter or leave whenever there was enough water in the tidal basin to float them. The gates in the existing cross wall were to be removed, so that the proposed new and

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[1] London, 1721.

[2] The serious condition of the harbour at about this period is well illustrated in a paper in *Arch. Cant.* xxxii.

the old basins would communicate freely, and he even went so far as to suggest a plan, which was carried out later, by which the sluice from the Pent into the inner basin should have added to it gates by which vessels might pass into the Pent, which he thought was deep enough for the accommodation, at any rate, of small ships. Another advantage he claimed as resulting from increasing the size of the floating dock was the greater bulk of water which would be available for discharging on to the bar at the harbour mouth, though he omits to notice the danger he had pointed out when criticizing the work of others, namely, that by using the water of the floating dock for this purpose the ships lying in it would be left stranded until the next tide.

It would seem as though lights as guides to ships coming in at night did not then exist, for one of his minor suggestions is that such might be set up for the coming in by night, when fair weather may make it practicable. The whole work, he says, should not cost more than five and thirty thousand pounds, 'especially if the stone in or about Dover Castle, which is not anyway of use there, be ordered to be employed in the performance of this work'. If, as the words imply, he intended to turn the castle into a pier, we may indeed be thankful that his plans were not adopted.

None of his suggestions were followed, but, as a less costly alternative, the old remedy which had failed so often before was again tried. Thompson had built two groynes, Stoneham's and Chapman's, south of his pier, thinking that they would catch the shingle and prevent it drifting to the harbour mouth; these had been replaced by three shown on the 1641 plan, Archcliff, Hamon's, and Stoneham's, and now another and more important groyne was tried, Cheeseman's Head, built out almost exactly from the spot where is the root of the present Admiralty pier. It answered admirably for a short time, but as soon as the beach had banked up against it and it could hold no more, the flow passed on to the harbour mouth, indeed, the last state was worse than the first, for the beach, starting from the end of the projecting head, came more easily and quickly to the harbour mouth than it would have done if the head had not been there. In later years, to meet this difficulty, fifty feet were taken off this head.

We next come to two admirable records of the condition of the harbour a few years later. The first is a plan of 1737.[1] In this, Paradise, which still remained as a mud flat, appears with the bridge over its mouth joining the ends of Council House and Strond Streets. The outer harbour, though more approaching to its later outline, is much as it was in 1641; behind it lies the cross wall of 1660, with its more recent gates and sluices. On the west side of the inner basin are the quays we read of in 1676, the little dock by what was then

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[1] B. M. King's Lib. xvi, 46.

Matson's quay still existing, but Matson's quay has now become the Navy Victualling yard. On the opposite side of the basin is the quay which in 1676 was the New Buildings quay, behind which, on what had been Braemes's holding, is a square block here called 'The Buildings', and evidently the 'New Buildings' of 1676. No other buildings existed on the sea front where is now modern Dover, indeed, the whole of this waste land was occupied for many years to come by two rope walks, the upper and the lower, which appear in all the pictures of Dover which begin to be common towards the end of the seventeenth century. The 'bowling green' of 1641 has vanished, and nothing takes its place. The Pent is unchanged, and extends from its cross wall up to 'Buggin's' bridge,[1] though at this date the flow of water from the Pent to the sea under the Castle cliff, the 'East Brook Water' of 1641, no longer ran. As yet, however, there are no houses outside the town wall at this point. Both sides of the Pent are shown as what they must have been, mere mud foreshores. Almost contemporary with this plan comes, in 1739, the panoramic view of Dover by S. Buck,[2] taken from the sea. Comparing this with the plan of 1737, and checking it with what one knows of Dover at this date, one cannot but marvel at its wonderful accuracy of detail. On the sea front we have Cheeseman's jetty, built a few years before, the two jetties forming the entrance to the tidal basin, the southern of which had undergone various alterations of shape; a little inside the north jetty had been built a slight projection, which yet survives, the object of which was to break the swell which, coming round the end of the south jetty, ran along the inner side of the north jetty and caused much disturbance in the tidal basin. Just behind this, on the Braemes's plot of 1641, is the block of buildings, the 'New Buildings' of 1676. Opposite this, across the harbour, are the two Flemish gables of the rival New Buildings, said by Buck to be the Custom House,[3] as it continued to be until 1806. The rest of the sea front, now modern Dover, is occupied by the two rope walks, and on to it, between them, leads Brunyar's bridge. Opposite this, one small building is shown, occupying the site of the Bowling Green of 1641; this, though not named, seems to be what became later the Ordnance yard. Paradise appears an open space among the houses, as it still was. The inner basin formed by

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[1] This is Brunyar's bridge of Eldred's plan. The name had passed through an intermediate stage, Bruggins.

[2] The engraving is well known; the original, a drawing in Indian ink, and wanting the lettering, is in my possession.

[3] So accurate is Buck, that one recognizes this building by comparing it with the drawing by J. P. Neale, in the collection formed by the late Mr. Martin Mowll of Dover, reproduced in *Huguenot Society, Proceedings*, iv, 101. It was used by the French Church up to 1731, and must have become the Custom House between that date and 1739. Possibly, however, only one room was occupied by the Church, in which case the Custom House may have been established here earlier.

the cross wall shows its entrance through the latter, on each side of which are the sluices lying directly opposite the harbour mouth which they were used to scour. At the back lies the bridge over what had been the sluice leading into the Pent. This sluice had, in 1734, so the minutes of the Commissioners tell us, been replaced by gates allowing entrance to fishing and other small craft into the Pent, where moorings were put down for their use, thus carrying into effect one of Perry's proposals of 1718.

In 1747 there is an engraving of Dover [1] which is very valuable topographically; taken from the lower part of the Western Heights, and looking northeast, it gives the line of Snargate Street, the Pent, and the waste beach between
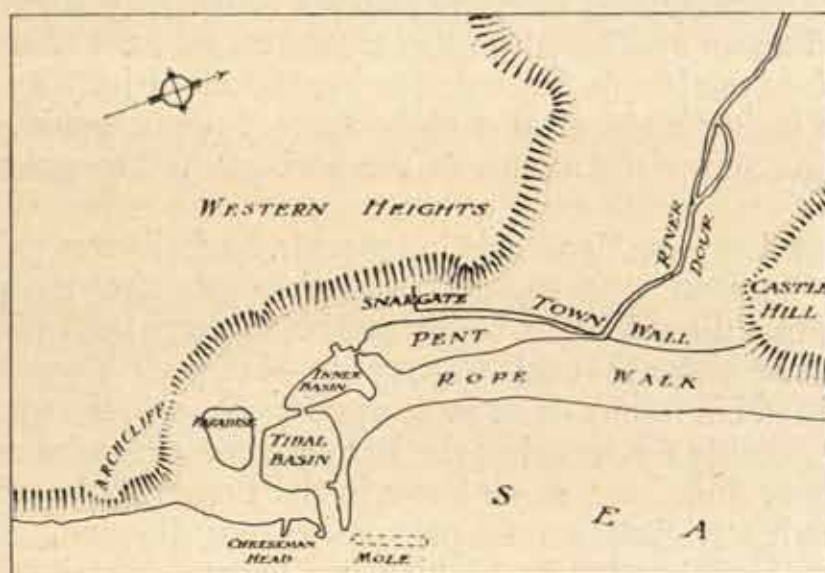
Fig. 5.

it and the sea, on which are the rope walks, and here also only one building is shown, standing opposite Brunyar's bridge. Braemes's 'New Buildings', then the Custom House, appear as clearly as in Buck's drawing.

From 1723 on throughout the whole century financial questions stood in the way of any serious work being undertaken at Dover. Much of the money hitherto devoted to that end had been derived from what were known as Passing Tolls, a tonnage of 3d. paid by the passing ships. In 1723 Rye, which was still hoping to save itself from complete annihilation, was successful in obtaining two-thirds of these tolls; this proportion, reduced to a half in 1758, continued on until 1797, when the case of Rye was finally seen to be hopeless, but Dover even then never obtained more than half. Throughout the century then nothing radical was done, and the harbour continued to be blocked as before, and from

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[1] From a picture by Richard Wilson, which I have never been able to trace. The engraving is dedicated to the Duke of Dorset.

time to time fresh engineers were called in to advise. Perry (1718), whose report we have already quoted from, was followed by Smeaton in 1769. He notes that at times, owing to a combination of south-west winds and neap tides, 'such a quantity of beach will be lodged between the pier heads, and to so great an height that a vessel drawing but four feet of water can hardly get into or out of the port'. The reason for this is simple, the rise and fall of neap tides is but slight, the inner basin and Pent therefore receiving less water than usual at these seasons, had less to discharge on to the bar at low water. But not only was the body of water less, but its power was decreased by the fact that the neap tide not falling as low as usual the fall of the scouring stream was much less. Smeaton's remedy was to carry out the south jetty some ninety feet— Perry's proposal again and based on the same reasoning. There was no preventing the drift of the beach, but lengthening the south jetty against which it first struck, and laying its head at a more correct angle would, he said, shoot the flow of shingle across the mouth of the harbour, and so prevent it lodging there.

Nothing, however, was done, and in 1782 Mr. Nickalls was called in. While he agreed with Smeaton as to the necessity of lengthening the piers, he went much farther in this direction, for he proposed to carry both piers out 200 ft. Possibly because he knew that this was a counsel of perfection which the funds would not admit of, his report dealt more specifically with the question how the body of water available for scouring the bar could be increased and made more efficient. This was contained, as we know, in the Pent and the inner basin, and it was to these that Nickalls's main proposals were directed. He advocated enlargening and deepening the Pent, which was being slowly silted up by deposit brought down by the river, and widening and deepening the passage thence into the inner basin; this latter also was to be deepened, and better sluices provided in its retaining wall to discharge the water. Much of what he suggested was done, and indirectly, the Pent was made more useful as a dock for vessels. However, the piers were left untouched, and the beach continued to accumulate as it had ever done, until in 1802 Messrs. Rennie & Walker were summoned to advise. We gather from their report that things were even worse than they had been. Smeaton had noted that at times there was only 4 ft. of water over the bar. The last experts speak of 'a bank [of beach] of nearly 300 ft. in length, which frequently shuts up the mouth of the harbour to such a degree that vessels drawing 3 ft. of water can scarcely enter it at neap tides'. They conclude that no scouring can ever effectually deal with an obstruction of this magnitude, and agree with all their forerunners that the only remedy lay in carrying the south jetty 'into a depth of water and strength of tide sufficient to send the beach past the mouth of the harbour, with the head made of such a form as to give it

a proper direction'. Perry, Smeaton, Nickalls had all said the same, and yet nothing was done.

Mr. Moon next comes on the scene, and as harbour master early in the nineteenth century must have been well acquainted with the harbour. His first practical work was the repair of the north jetty, which had been seriously damaged in 1808.[1] He then applied himself to the more important question of keeping the harbour mouth clear, and here he differed from all previous experts, for he held, as I think correctly, that no prolongation of jetty could ever effect it. He reverted to the scouring plan, first devised by Digges, only he proposed to make this far more effective than it had ever been by bringing the body of water much nearer the spot where it was to act, and by directing its rush by means of culverts exactly on the place where it was needed. To do this he formed a reservoir in the southern angle of the tidal basin which lay just inside the south jetty, that is in what had been known as the Bight in the sixteenth century. From this reservoir culverts ran under the south jetty, whence the water shot over a stone apron and through several diverging openings, which were used as circumstances required, to direct the stream straight on to the bar. The reservoir was, of course, filled by the high tide and discharged at low tide. To add to the body of water, this reservoir was connected with the inner basin by a culvert, so that not only was the water discharged nearer the point required, but the body of water was greater than it had been by the contents of the reservoir; connected with this reservoir was a dry dock, the contents of which were also used, if no ship occupied it, to reinforce the main body of water. The reservoir and dock which occupied a considerable space, not only diminished the size of the tidal basin, but added a new danger to it, for their straight walls caused a reverberation of the swell setting into the harbour mouth, a swell which had formerly died away on the mud flat. The resultant unsafe state of the harbour was much dwelt on in the inquiry held by a Committee of the House of Commons in 1836.

There must have been some doubt in the Commissioners' minds as to the wisdom of Moon's scheme, for they again had recourse to Mr. Walker (of Messrs. Rennie & Walker), who in 1812 renewed his suggestion of ten years earlier, namely, to carry the south jetty out at least to low-water mark, and we now get almost for the first time the practical reasons which had no doubt much to do with the rejection of this often urged plan. These were based on considerations which it would need a seaman, and one experienced in sailing ships, to appreciate. Shortly, the opinion of the seamen experts consulted came to this, that any lengthening of the south jetty would make both entering and leaving the harbour far more difficult than it was, especially with winds from both the southward and eastward. This opinion had a great weight

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[1] Extensive repairs had already been made to this in 1791.

with the Commissioners, as no doubt it deserved to have, and it was probably for this reason that Mr. Moon's less drastic plans were preferred.

Mr. Moon died in 1832, and nothing much more was done to the harbour until 1838, so here we may pause for a moment to consider a question which arose at this time out of Digges's work in 1585. He had foreseen as one result of his schemes that much land would be gained for building, how much this was, appears from Eldred's plan of 1641; for, as he there both tells us and shows us, everything lying outside Snar Gate, with one or two slight exceptions due to some earlier settlement, was new land. This, under James I's grant, belonged to the Commissioners of the harbour, and its rents formed part of their income. The sea front was yet awaiting development, partly because it was hardly yet thought safe for building, partly because the idea of Dover as a seaside resort had not yet dawned. The rest of the new land had by 1641 all been allotted to tenants who held under the Commissioners by lease. These leases were for twenty-one years—unless the holder were either Mayor or Jurat, in which case they ran for thirty-one years, and were renewable, provided notice was given two years before their expiry. The tenants had built houses, and the rents were fixed at 2s. 6d. per pound of assessment to the poor-rate. This had gone on without interruption for some two hundred years, and the tenants' interests had come to be regarded, and indeed were dealt in, as practically freehold. In 1803, the rents then amounting to £630, the Commissioners began to wonder whether the bargain were not a one-sided one, as indeed considered from the point of view of the financial principles of to-day it clearly was. An ordinary ground lease is granted for ninety-nine years, during which period the tenant recoups himself his outlay on building, and the property then reverts to the ground landlord, who thereafter enjoys the rack-rent arising from the premises. At Dover, however, the tenant remained in the enjoyment of the premises for ever, subject to a small and practically unvarying yearly ground-rent, for it amounted to no more than that.

The question once raised by the Commissioners, the tenants rose as a body to defend the system under which they profited so largely, and the arguments were much those used in the case of a recent finance act which imposed a tax on the falling in of the reversion of a ground-lease.[1] The memorialists being unable to appeal to any law, for indeed there was none, base themselves on prescription, which they say had produced 'a perfect confidence' that the system never would be departed from. In faith of this, they had expended vast sums in building on land originally of little or no value, and now regarded their tenures as freeholds, subject only to a quasi quit-rent. They were on firmer ground when they pointed out that where the Commissioners had taken any of

[1] The 'memorial' presented to the Commissioners on the 30th of August, 1803, is set out at length in *An Historical Sketch of the town of Dover*, Dover, 1807.

these lands for improvements they had been compensated for as though freehold. Forgetful of Digges, but for whom the land would never have existed, they urge that their expenditure had converted a barren and almost wholly unproductive spot of beachy ground into an estate with a present rental of £600. The memorial concludes with threats of what will happen if the scheme be pursued. Confidence destroyed, depreciation in value would follow, improvements would cease, and no tenant would expend more than was necessary to support his house until the end of its current term. Thus houses would fall to dilapidation, the site would be abandoned, and the tenants ruined. The results to the rest of the town are left to be imagined. A faint suggestion of a counter-proposition is made, namely, that the tenants should be allowed to purchase the freehold reversion of their holdings, and the fact that such a suggestion should be made is at any rate evidence of an admission by the petitioners of the legal right of the Commissioners to bring up their proposal.

The matter dragged on for years, and it was not until 1812 that a compromise was arrived at; under this all existing leases were cancelled, their then value being taken into consideration, and new leases for sixty-one years were granted at a rent of 3s. 6d. per pound of assessed value; these were to be renewable at their termination for twenty-one years on such terms as should then be thought just and equitable.

One result of this movement was to affect the ground once the harbour called Paradise, and disused since about 1583, from which date it had lain a mud flat, enclosed by the houses of Round Tower and Bulwark Streets. About 1800, land as one must think becoming more valuable, building on this site was proposed, and leases for this purpose granted. Before the lessees had begun to build, the new policy of the Commissioners was published; this naturally alarmed the proposing lessees and building did not seriously begin here before the arrangement of 1812. Under this the Paradise leases were to be for ninety-nine years, as from the date of their first granting shortly before, and at the rent then fixed, i.e. 3s. 6d. per pound of assessed value. This was, it will be seen, a fair arrangement, in accordance with the system of building leases we are accustomed to, and led in time to a considerable increase of revenue; especially as the development of the sea front was to begin very shortly, and here the leases would no doubt be granted on the usual building lease system adopted in the case of the Paradise lettings.

Moon's new reservoir and system of culverts running under the south jetty to discharge directly on the harbour mouth were no more successful than any of the previous schemes, even though their power had been added to in 1832 by Sir William Oxenden, and in 1834 we read of them that though 'some relief is obtained thereby, yet they are by no means adequate for remedying the evil'; for some weeks indeed at the end of 1833 the entrance to the harbour had been

entirely closed.[1] So serious was the agitation then set up, that it had as its immediate result considerable alterations to the interior of the harbour, and ultimately, far more important point, it led to the beginning of the new outer or Admiralty harbour, the latter only recently completed.

The first result of the agitation was a Committee of the House of Commons which sat in 1836. Much evidence of expert seamen and pilots was taken, and while they differed considerably on what should be done to improve matters, they all agreed on the importance of Dover as a harbour, as on its dangers. They said that the harbour was not so safe to lie in as it had been before the upright walls of the new reservoir had lessened its size and added to its unrest; this, says Captain Boxer, 'has almost ruined it as a place of shelter for ships in bad weather,' and Captain Elliot confirms him, 'the modern alterations have contracted the harbour to such a degree with upright walls instead of beach that the swell is such that vessels rise and fall six feet, and must be at a considerable distance from each other, on account of the motion'.

Nor, notwithstanding all the new flushing arrangements, was the bar at the harbour mouth any better, and this for two reasons. The culverts necessarily discharged at a fixed point, and, with neap tides, aided by the bay back eddy, which caught the shingle as it was drifting past the end of the south jetty, the bar often formed inside the point of discharge. Secondly, the amount of water which could be discharged depended largely on the amount which could be retained at high tide in the inner basin, whence it was led to the reservoir. Now the swell in the harbour often prevented the gates of the inner basin from being shut until the tide had dropped some six feet, with the result that a considerable body of water was lost; Captain Boxer on these points says that he had seen the sea throw the beach past the mouths of the culverts at the end of the south jetty head and almost fill the mouth of the harbour in a tide, and under such circumstances the culverts were of no sort of use. Mr. Port, a pilot, gives a definite instance of what happened in 1824 when the bar formed between the two pier heads, the largest he had ever seen, 'it was a complete block, not a nutshell could float in or out'. This was only removed by a plough and manual labour, followed by a direct discharge of water on it from the inner basin, for lying within the culvert mouths, the discharge from these could not affect it. Mr. Worthington, whose suggestions we shall have to consider presently, says, 'we are as subject to a bar now as ever we were, and I consider the natural qualities of the harbour to have been quite destroyed'.

What was to be done? for in the face of such a burden of evidence as this, something had to be done. No doubt many proposals were made, but the best known of them are those of Lieutenant Worthington, whose enthusiasm for

[1] Memorial of the inhabitants of Dover to the King, quoted in Worthington's *Proposed Plan for improving Dover Harbour*, Dover, 1838.

Dover was as great as it was disinterested. His plans were based on a close study of the harbour under all possible conditions, and were published to the world partly as evidence offered before the Commission then sitting, and partly in a work published two years later.[1] In the latter he summarizes what had previously been done to the harbour by extensive quotations from early authorities, gives a verbatim report of the evidence adduced before the Commission, and then propounds his own plans. These are divisible into two heads: first he proposed a breakwater carried out into the sea from the south jetty head for 250 ft.; he gives reasons for thinking that this would be effective, and detailed plans showing how it was to be built; into it was to be adopted the scouring system first initiated by Digges in 1583 and recently perfected by Moon. Here he was, with slight variations, following the plans proposed by all the engineers who had preceded him.

His second proposal is more interesting as it is more original, for in it we get the germ of Dover harbour of to-day, the first suggestion that is of enlargement by making a new harbour outside the old one. His plan was, however, a very modest one: he proposed to enclose the angle of sea formed by the north jetty and the sea front with two walls, one running outwards for 350 ft. from the Esplanade, as we may now call it, the other returning at right angles 700 ft. up to the north jetty, of which all but the extreme outer end, some 90 ft., would be removed to make an entrance of 350 ft. into the new harbour. Here without doubt, in Worthington's proposal of an outer harbour of some five and a half acres, we have the beginning of what has developed into the six hundred and ten acres of the harbour of to-day.

Not content with his evidence and his book he prepared elaborate models which he invited all the experts to examine, and some twenty-five pages of the work are filled with the opinions of those who had seen and approved his designs.

The need for enlargement was a crying one, and the prospect of it very fascinating, as is evidenced by the fact that though Worthington's plans were not adopted, the decision come to was to enlarge the existing harbour. It seems likely that Worthington's plan of doing this outside was too bold for the date at which it was proposed, and that to enlarge inside was thought safer.

To understand what was done we must go back for a moment to 1660. In that year the outer harbour lying below the Pent had been divided into two portions by a cross wall which stretched from the lower end of Strond Street to the corner of the plot of land held by Arnold Braemes in 1641, land which lay just inside the prolongation of the long Pent wall towards the north jetty. This plot of land had in 1676 formed the 'New Buildings quay', and on it stood the New Buildings. Adjacent to these had, by 1838, come a battery, known as

[1] *Op. cit. supra.*

Amherst's,[1] and certain other buildings, among them two well-known inns, the 'York' and the 'Dover Castle', between which and the Pent cross wall was still, as in 1641, the small shipbuilding yard. All these premises were now thrown into the area of the tidal basin, thus bringing the latter up to the south-eastern end of the Pent cross wall, and through this a new entrance into the Pent was made direct from the tidal basin. The already existing inner basin was thus left communicating with the tidal basin at its north-eastern end, but this was met by prolonging its enclosing cross wall (of 1660) up to the Pent cross wall. Digges's old sluice and gates connecting the Pent with the inner basin were done away with soon after (1844). Some five acres of additional harbour space was thus gained, and a better and more easily reached entrance into the Pent obtained. The work was completed in 1844, and inaugurated by the Duke of Wellington, and here we must regret that in his honour the name Pent, which condensed into itself the history of so many years, was changed, for the Pent was henceforward known as the Wellington dock. In later years many further improvements were effected in what must now be called the Wellington dock, by the formation of quays around it; also the increase in the size of the channel steamers, which resort to it for repair, made it necessary to rebuild the lock gate of 1838 on a much larger scale; this was done in 1888. Before finally leaving the Pent, one further alteration at its upper end must be noticed. Here, where the Pent long wall came up to the town wall, it was from the first crossed by Brunyar's bridge, which gave access from the town to the waste land on which were the rope walks. This bridge is shown in the plan of 1641, and lay just north of the point at which the Dour discharged into the Pent. In 1800, probably because it was beginning to be thought that some better use might be made of the sea front, a bridge was built a little below the old bridge, and named the New bridge. It crossed what could be indifferently called the mouth of the Dour or the upper end of the Pent, and cut off the end of the Pent at this its northern extremity. Up to 1840 the Dour could still be seen running under this new bridge, but in that year the river between the new bridge and what had been the town wall was arched over to carry buildings, and to-day the Dour and the bridge have equally disappeared, for the end of the Pent which formerly came up to the New bridge was covered in 1852 by buildings which extend for some 300 ft. below it.

The old inner basin formed by the cross wall of 1660 has, like the Pent, also been rechristened, though here we deplore the loss of no older name. In 1871 this basin was deepened, and the small dock which ran up into the Common Place, and formed part of Matson's quay of 1676, was done away with, the Custom

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[1] This was one of four forts built in 1784 along the sea front. The other three were Guildford, under the Castle cliff; North, opposite to where the New Bridge of 1800 crossed the upper end of the Pent; and Townsend, on the site of the South Eastern Railway Station.

House quay being carried on in a straight line up to the Pent cross wall. Reopened by Lord Granville, the basin since then has been known by his name.

The formation of the harbour as it now is was due in the first instance, as we have seen, to the unexpected results which followed on the building of Thompson's pier and mole in 1533, for these were the cause of the bank of shingle which formed between the Castle cliff and the pier head. Consolidated to some extent by the Pent long wall of 1583, this bank remained mere beach, unfit for building; indeed the effect of the sea upon its front from time to time caused great anxiety both for it as well as for the Pent wall which lay behind it. Various efforts were made at different dates to meet this danger, by building out groynes to stay the movement of the shingle. One of these groynes, Pouprit's
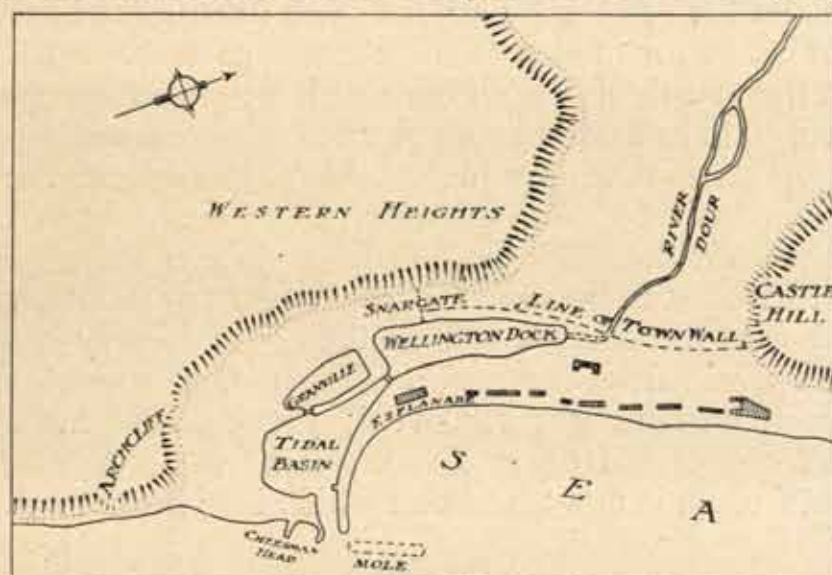
Fig. 6.

of 1638, is shown on the 1641 plan. In 1751 a more important work of the same kind was built, known as the Castle jetty, and was thought so successful that it was lengthened by fifty feet in 1833. Up to 1816, however, the foreshore was evidently not considered safe for building; occupied almost entirely by two rope walks, only where the Pent cross wall came on to it were there a few buildings. Beyond these, along the sea front, the only building was the Ordnance yard which lay opposite the New bridge. In 1816 it began to be thought that building might be possible, and that Dover could be made a seaside resort. Four blocks of houses, now known as the Marine parade, were planned, lying to the north of the Ordnance yard, and during the next few years the line of sea-fronting houses was continued southwards as Waterloo crescent and the Esplanade to form the sea front of Dover as it now is. The Amherst battery, destroyed in 1838 by the extension of the tidal basin, was rebuilt on a new site a little to the northwards, but modern ideas of fortification soon caused its entire removal, which took place about 1844.

The year 1847 marks the beginning of the work which has developed into the Admiralty harbour of to-day, though at that date the scheme did not contemplate anything so large as what has actually been executed. Starting from Cheeseman's Head, the Admiralty pier was begun in that year, and completed to a length of 2,100 ft. by 1871. Since then it has again been lengthened 580 ft., curving round eastwards towards the centre breakwater. This in its turn is continued by another pier, which reaches the cliff again at a point well to the north-east of the Castle, just under the convict prison. Inside this great enclosure another pier has been built starting from the southern end of the Esplanade and stretching south-eastward towards the Admiralty pier, thus enclosing and sheltering the original entrance to the harbour. The angle lying between the Admiralty pier and the old south jetty has been filled in, and here is placed the new station and quays for the use of the channel packets.

The bar at the mouth of the old harbour is a thing of the past, for the beach now has to travel round the Admiralty pier and the breakwater, both, it is hoped, so far out in deep water that no shingle will now be deposited in the entrances. Moon's elaborate flushing arrangements have become useless, his reservoir and dry dock abolished, and the space they occupied thrown once again into the tidal basin of the old harbour to become the goods wharf of the railway.

One would wish to conclude this sketch of the history of Dover harbour by quoting once again from the report of 1581, 'and soe no doubt at all of a perpetuall good harboroughe for ever'; yet a consideration of the latest Admiralty chart cannot but bring to one's mind the words of the Preacher, 'That which hath been, is now; and that which is to be, hath already been'.

DISCUSSION.

Dr. MARTIN was surprised to see the south-westward trend of the Dour, as in the earlier maps it flowed south-east. The outlets of rivers and harbours on the south coast were constantly being pushed eastward by the shingle. There was a conflict of tides at Dover, and the northern current must have had the mastery for centuries, as it had encircled Castle Hill and carved out the western heights. Instead of putting the harbour under Castle Hill, the early engineers chose the opposite side of the bay and stopped the swirl, without which the channel was bound to silt up. Knowledge of conditions on the south coast should have taught them the futility of checking the swirl. The object of their sea-walls was to form a harbour, but the only effect was to reclaim land in front of the town. The author had shown a fine series of views, and it was possible there were more in the same collection at the Bodleian.

Mr. SANDS returned thanks for a valuable contribution to the early history of Dover, and remarked on the omission of James Needham, who lived early in Henry VIII's reign. The south-eastern harbours all suffered from the same defect: sufficient irrigation was not provided to scour the passage. Owing to dead water there was constant silting, and the mouth could only be kept clear by continual dredging.

The PRESIDENT thanked the Treasurer in the name of the Society for a most lucid and interesting account of a gigantic struggle with natural forces. The local difficulties had been laid before the meeting in a masterly fashion, and the moral was that successive engineers never seemed to have learned wisdom from the failures of their predecessors.

XI.—*On the Pottery from the Waste Heap of the Roman Potters' Kilns discovered at Sandford, near Littlemore, Oxon., in 1879. By* THOMAS MAY, *Esq., M.A., F.S.A., F.S.A.Scot.*

In cutting drains for the Oxford sewage distribution on Mynchery Farm, Sandford, Oxon., near the Thames, in 1879, four potters' kilns and other Roman remains were discovered, and systematic exploration of the site was then undertaken by the late George Rolleston, F.R.S., Linacre Professor of Physiology, assisted in the work by our Fellow Mr. Heneage Cocks, who studied anatomy under Professor Rolleston, and by the sewage engineers Messrs. Cobbold Brothers. Unfortunately the Professor died before fully working out the results of the exploration, and only a brief summary appears in the appendix to his *Scientific Papers and Addresses* (1884), ii, 937.

The specimens from the site of the kilns selected by Mr. Cocks, and his observations on the site, have been utilized in the preparation of this report; his fragments are marked 'Poynetts Museum'.

The bulk of the pottery and the other portable objects were deposited by Dr. Rolleston in the University Museum at Oxford and transferred in 1886 to the Ashmolean, where a number of skilfully restored vessels and a clay model of one of the kilns prepared by Mr. J. S. Cobbold are exhibited. From this exhibit the remainder of the sectional drawings and facsimiles annexed were made by permission of the Keeper, Dr. D. G. Hogarth, F.S.A., and with the valuable co-operation of another Fellow, Mr. Thurlow Leeds.

An aggregate, estimated at 100 ft. of potters' waste, from beside the kilns, is said to have included all the known descriptions of the Roman period. This is, however, somewhat doubtful. All were supposed to have been made upon the site except a few pieces of red glazed sigillata (Samian). Forty-seven fragments with potters' stamps, mostly illegible, including Samian and mortaria, were noted by Mr. Cocks, but no list of them was made by Dr. Rolleston, and they have been mixed with those from other localities in the cellars of the museum, out of which accumulation ten accurately labelled fragments with potters' marks illustrated on p. 233, (fig. 4) have since been extracted.

Two of the kilns were built of rough stones in a circle set in clay, and two formed by lining a round hole in the sandy subsoil with massive clay which was hardened by an internal wood fire before charging. All had one or two inside flues at the base, an outer fire-hole, and, about a foot higher, a perforated floor of baked clay retaining impressions of straw or rushes. According to the recollection of Mr. Cocks the perforations in the floor were very numerous and not larger than a quarter of an inch in diameter. They served to admit the heat into the oven.

None was preserved to its full height, but the sides of the chambers were probably substantial, more or less domed or 'bee-hive' shaped with a central opening for packing the kiln and regulating the draught. This opening was apparently covered in with grass or straw after each charge and then roofed with little slabs of clay in the manner described by Wright, *The Celt, the Roman, and the Saxon*, 5th ed. 1892, p. 268, and illustrated by Artis in *Durobrivae*, since mention is made by Dr. Rolleston of 'finding at Sandford a considerable abundance of coarse flattish pieces of burnt clay as if with the impressions of straw like a cream cheese, believed to be the wrappers used in covering the pots over during the baking'. One of these in the possession of Mr. Cocks has the impression of the potter's fingers.

One of the kilns measured in length over all, including the fire-hole, 8 ft., and in width, including the two divisions and the partition, 7 ft.

Fig. 5, **26**, an article of kiln furniture, found according to one account ' in a well situated NW. of one of the kilns', is a prop or pedestal $2\frac{1}{2}$ in. high, with a moulded base and a slight expansion at the top which is grooved for supporting the rim of a vase above the floor of the kiln. From the well referred to several vases and fragments recorded below were obtained, of types evidently not made in the locality.

Fig. 3, *k*, is a mask of baked clay in relief, probably for impressing a mould to make reliefs for application to the sides of vessels, possibly in imitation of the lion's head on the spout of Dragendorff's form 45, like the rudely moulded and applied reliefs on fig. 2, **14** and fig. 3, *e*. A pottery mask of about the same size but of inferior artistic merit, found at Pevensey, is illustrated by Salzmann, *Sussex Arch. Coll.*, lii, pl. 8. The hole for the spout was, of course, pierced after the application of the mask to the side of the vessel.

Two coins discovered in association with the pottery and exhibited in the same case at the Ashmolean are: (1) a first bronze of Antoninus Pius; reverse, a priestess standing to *l.* offering upon an altar; (2) a burnt silver coin larger than a denarius, of debased character and undecipherable, on which appears to be a spiked crown, dating about A. D. 250–300.

Dr. Rolleston mentions the discovery of two human skeletons 'in the earth adjoining the double kiln: the bodies had apparently been thrown into a rubbish pit', but he furnishes no anatomical details regarding them. This omission may, however, be made good, since the skulls are probably preserved with others from various sources at the University Museum.

The drawings are arranged on figs. 1-9 in chronological and typological order so far as possible, and the page on which each illustration is referred to is given in the List of Illustrations.

The following groups are distinguishable:

Section I.   Imitations of Samian shapes in ordinary clay.
    „   II.   Rosette-stamped bowls and red clay slip-coated vessels of the 4th–5th centuries (Sandford and New Forest wares).
    „   III.   Beakers of bulbous shape colour-coated and decorated *en barbotine*.
    „   IV.   White clay vessels, flagons and mortaria, etc.
    „   V.   Discoloured and distorted vessels (principally wasters) in ordinary clay.

Section I.   IMITATIONS OF SAMIAN SHAPES IN ORDINARY CLAY.

Fig. 1, 1 (1588).[1]   Lower portion of cup (partly restored in drawing) with doubly-curved side, imitating in hard dark drab clay form 27, which ranged about A. D. 50–159.

Several fragments in coarse clay of cups of similar shape in the Hambleden Museum, obtained by Mr. Cocks from excavations at Yewden (*Archaeologia*, lxxi, 173), lower down the Thames, 19 miles SE. of Sandford, were probably made in the kilns under notice. A whole example, found at Preston, near Wingham, Kent, is published in *Journ. Brit. Arch. Assoc.* iv, 393 (Maidstone Museum).

Fig. 1, 2 (1604).   Imitation of form 33. The clay is buff with rough surface and remains of light red slip below base.

An imitation of the earliest type with offset and potter's stamp ⅡXⅠƧⅠO, in Belgic technique, is recorded in *Pottery found at Silchester*, p. 175, pl. LXXIII, 179. Part of another, found at Corbridge, not recorded, is of light tile-red clay coated with bright red slip. Two side fragments in coarse clay are recorded by Mr. D. Atkinson from Lowbury Hill, Berks. (*Report*, p. 64, fig. 17, nos. 57, 58).

Fig. 1, 3 (1580).   Grey to drab clay discoloured by overbaking, evidently a 'waster', possessing features peculiar to the Samian forms 29 and 30, with an incised pattern suggesting festoons.

Form 29 ceased to be made about A.D. 85, and form 30 was partly contem-

[1] The year of accession 1886, which follows the Museum number, is omitted throughout.

porary, so that potters may have been at work at Sandford in the first or early second century. Similar decoration occurs on bowls and jars of so-called Upchurch ware attributed to the first century by Walters (*Cat. of Roman Pottery*, p. li, M 2641–700). Two examples in Belgic technique (fumed grey clay coated with black bitumen) are illustrated and described from Silchester (*op. cit.*, pp. 170–1, pl. LXXI, types 163, 164). One fragment with incised semicircles occurred at Yewden, and many other widely distributed examples could be cited. On vessels from the Upchurch marshes it is common, and appears at Hofheim before A.D. 50; *Hofheim*, p. 362, type 102.
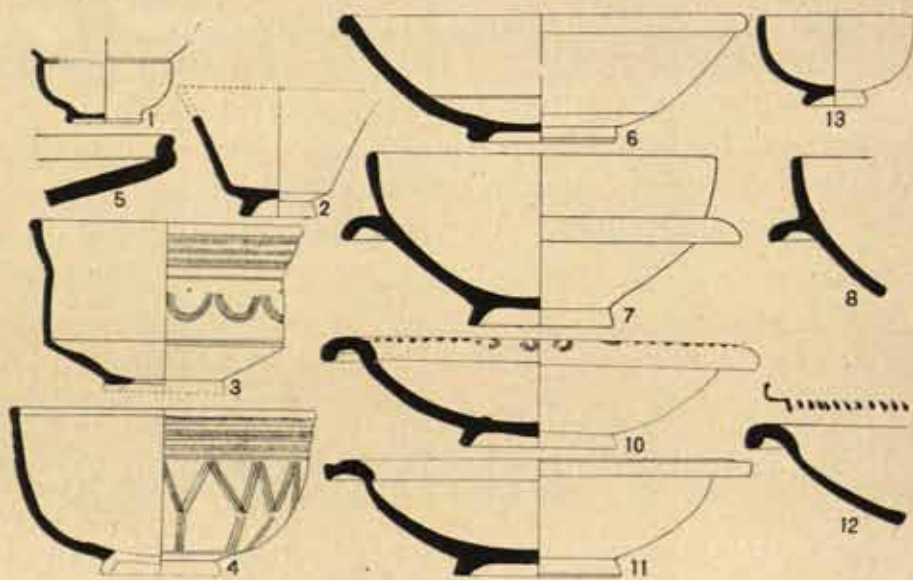
Fig. 1.   Imitations of Samian shapes in ordinary clay (⅓).

Fig. 1, 4 (1518). Part of a distorted vessel imitating in ornament, colour, and shape form 37, buff body with traces of bright red slip, as on specimens from Yewden and Silchester. Below the rim girth-grooves and roulette-notched rows alternate, and lower down are comb-marked zigzag lines and groups of vertical lines. The original type lasted from the time of Vespasian, A.D. 69–79 until the destruction of the sigillata industry by German inroads about A.D. 250.

Fig. 3, *g.* (1607). Illustrates a rim fragment of a bowl of like shape and ornamentation in soft dirty grey clay with darker slip coating.

Fig. 1, 5 (1607). This wide shallow bowl or plate is copied from a *terra sigillata* type numbered 79 by Walters (*Cat.*, pl. XLIV) from Pudding Pan Rock. It is form 1 in the illustration and lists of these vessels (*Proceedings*, xxi, 268, and xxii, 395) which are dated about 160–90. An example at Newstead, came from an Antonine deposit, A.D. 140–80. Another out of no fewer than fifteen from Silchester (*op. cit.*, p. 90, pl. XXXII, 28) bears the stamp of Regalis;

another that of Genialis—potters of Rheinzabern, showing that the Rhine and Thames were already important arteries of British commerce. Form 79 has been traced to an Arretine prototype (*Haltern* V, type 4 *a*, dated 11 B.C.–A.D. 9).

Fig. 1, 6 (1585). An open bowl or saucer with thick beaded lip, closely imitating the well-known and widely distributed form 31, at its latest stage of development. It consists of hard light red-clay of coarser texture than *sigillata* and is coated very thinly with a clay slip overbaked to brown-red outside but good red inside. Form 31 was coeval with form 37, but form 18, out of which it sprang, was
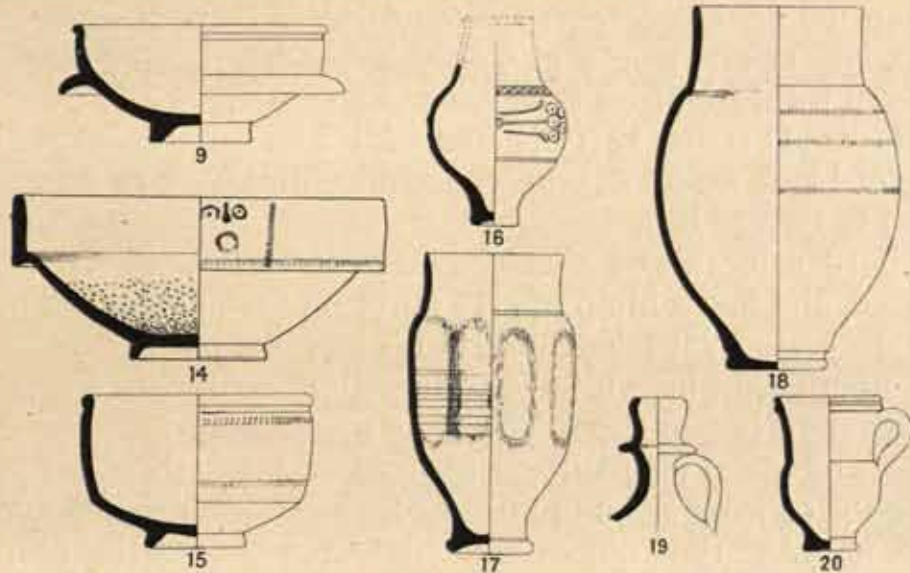
Fig. 2. Wasters, resembling New Forest wares, and other types (¼).

prevalent in the middle of the first century, and in turn imitated an Arretine prototype (*Haltern* V, type 4, dated 11 B. C.–A.D. 9).

The large bowl with upright rim and down-curved flange low down on the outside imitating the latest development of form 38 is represented by three more or less complete examples, 7, 8, 9, and in the Hambleden and Reading Museums by others in more perfect condition from Yewden and Silchester (*op. cit.*, p. 126, pl. LIV, 94). They are important as identifying and locating the source of undamaged productions from other sites, and fixing the latest date of the Sandford potteries.

Fig. 1, 7 (1570) is a waster of smooth tile-red clay burnt black outside and red-brown inside, and retaining traces of a slip coating. Its mouth is distorted to a roughly oval shape, 7½ in. by 7 in. across.

Fig. 1, 8 (Poynetts) is of well washed light-red clay with grey core, coated with darker red clay slip.

Fig. 2, 9 (1572) is of fumed dark grey clay coated with black bitumen.

The shape is recorded among those found beside the kilns at Ashley Rails, New Forest (*Ashley Rails*, p. 26, pl. VII, 5–10). Rude scrolls in white paint are on the flange of Yewden examples, a style prevalent in the fourth and fifth centuries. Parallels found at Pevensey, in *Sussex Arch. Collections*, lii, pl. 9, no. 5, and in the Roman fort at Huntcliff (*Journ. Rom. Studies*, vol. ii, p. 227, fig. 40, nos. 6 and 7), attributed to A.D. 370–400.

Seven whole specimens and fragments of *sigillata* bowls of the original form 38 are recorded as having been found at Silchester (*op. cit.*, p. 94, pl. XXXIV, 43), and their development traced from a bowl with small rim and horizontal flange close together found abundantly in the earth-fort at Hofheim (A.D. 40–51), and singly at Corbridge and Wroxeter (*Report* II, p. 43, fig. 16, numbered by Bushe-Fox type 82).

Fig. 1, **10** (1582), **11** (1583), **12** (Poynetts). All three (partly restored in drawing) are imitations of Dragendorff's form 36, usually with leaves *en barbotine*, and are evidently from the waste heaps.

10 is of hard smooth red clay coated with dark brown-red slip, and is flawed, distorted, and has a lump of clay burnt on to the inside. The top of the rim is rudely decorated with dots and scrolls in white paint.

11 is of smooth light-brown terra-cotta with greyish core coated inside and on the rim with dark brown slip. The lip is square-edged.

12 is of soft light-red clay with bright red slip, decorated on the rim with drop-shaped dabs of grey as on the finished ware from Yewden and Silchester (*op. cit.*, p. 126, pl. LIV, type 96), attributed to the end of the fourth century. A like date is assigned to Pevensey examples by Salzmann (*Sussex Arch. Coll.*, lii, pl. 9, nos. 6, 7, 8; cf. *Ashley Rails*, p. 28, pl. VIII, nos. 6, 7, 8).

Fig. 1, **13** (1588). This small hemispherical perfectly plain cup resembles Dragendorff's form 40 which was made in *terra sigillata* at Rheinzabern about A.D. 100, though it first appeared in Arretine and Belgic technique (*terra nigra*), types 6, 13, 81, at Haltern in the Augustan period; it is recorded at Hofheim, type 8, about A.D. 50, and at Niederbieber, type 10, dated A.D. 190–260. It is somewhat rare and is not useful for dating.

Section II. ROSETTE-STAMPED BOWLS COATED WITH RED SLIP, FOURTH AND FIFTH CENTURIES.—SANDFORD AND NEW FOREST WARE.

Fig. 2, **14** (1569), fig. 3, *e* (1604). These are both copied from form 45 (mortarium with lion-face spout), **14** in smooth buff terra-cotta with dark red slip, studded on the inside base with transparent glistening quartz fragments to resist hard wear, and fig. 3, *e* in tile-red clay coated with dark red slip almost equal to a glaze. On the vertical side of fig. 3 *e*, a lion-face is imitated roughly by stamped

curves and a conical protuberance with a central aperture which does not penetrate the side.   On **14** a face is rudely painted in white slip.   Parallel examples found at Silchester (*op. cit.*, p. 126, pl. LIV, type 95) and Wroxeter (*Report* I,
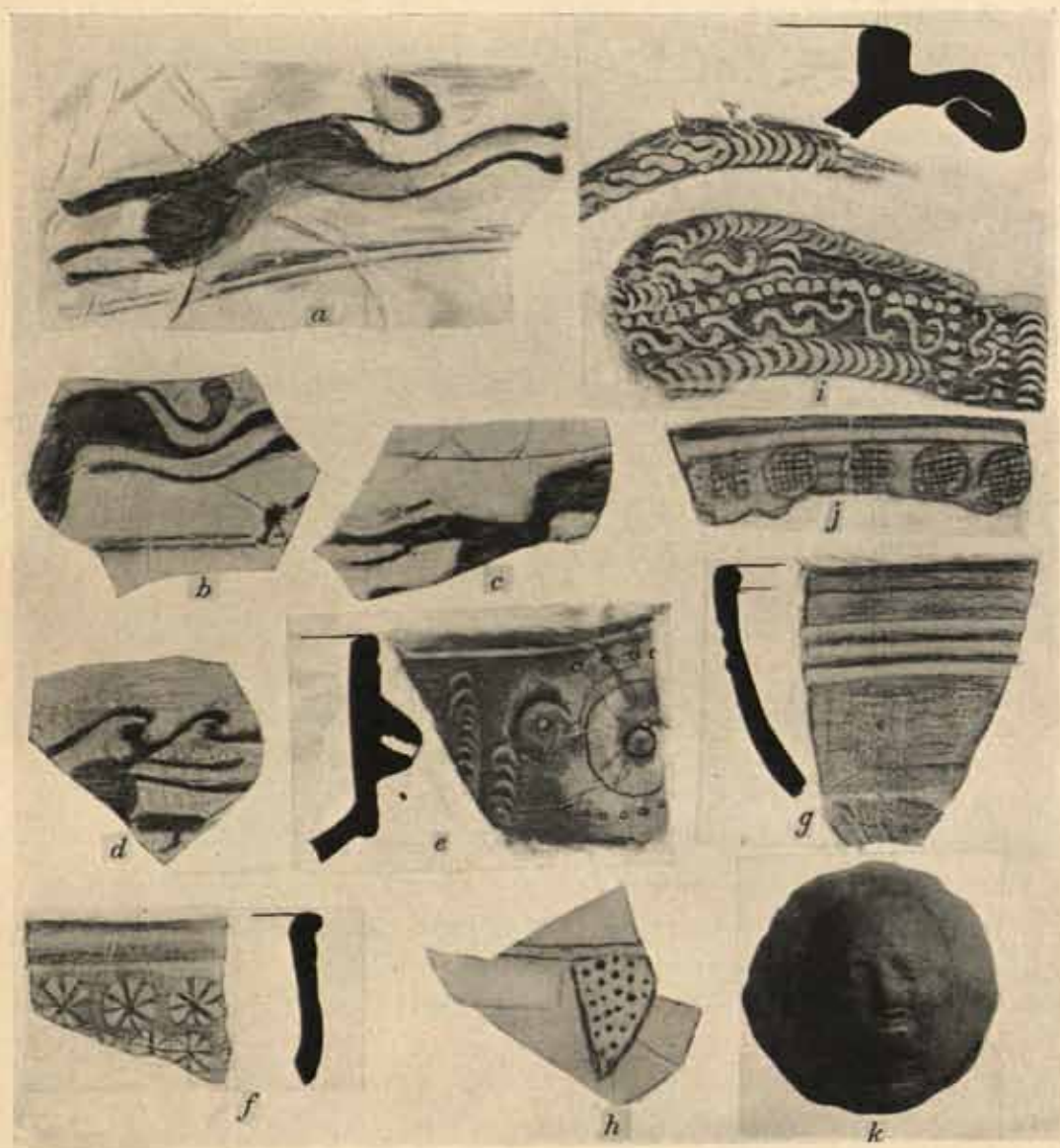
Fig. 3.   Ornaments on beakers and bowls, kiln waste ($\frac{1}{2}$).

p. 80, fig. 20, type 242) are placed by Bushe-Fox in the late third or fourth century; one recorded at Castle Collen, in *Arch. Camb.*, ser. 6, vol. xiv, p. 49, no. 14, was associated with a coin of Geta (A. D. 209–12).

Fig. 2, 15 (1579), and fig. 3, *f, fragment* (1601).   This ware may not be Roman (Walters, *Cat.*, p. xlix, M 2463–78).   The date is definite and the manufacture

local, in cream-coloured and buff body with red slip at Ashley Rails (*op. cit.*, p. 18, plates IV, V, and VI); distributed throughout the excavated sites of Britain, at Richborough, Pevensey, Kenchester,[1] Lympne, Albury, Wood-yates, Bokerly, Lowbury Hill, Colchester, and Wroxeter; particulars in *Silchester Pottery*, pp. 128 ff., pl. LVI, types 99, 100, 101, and pl. LVII, 1–23. In Hambleden Museum, obtained from Yewden, are 67 fragments including 26 bases of separate bowls. **15** is an upright-sided bowl with beaded lip separated by a girth-groove, and decorated with rows of roulette notches round the margins. The clay is rather rough with grey core, coated with pinkish slip, the height being 3$\frac{3}{16}$ in. and diameter 4$\frac{7}{8}$ in. Fig. 3, *f* is part of a similar bowl with slightly curved side decorated with two zones of stamped rosettes, the clay being pale red shading to buff and grey. The patterns employed resemble the 'wheel pattern' and 'wafer pattern' on an Anglo-Saxon urn from Islip, Northants (*Proceedings*, xxx, 114, figs. 1, 2), showing they were still in use during the fifth century at the beginning of the Saxon inroads. Facsimiles of potters' stamps or trade-marks on the bases of ten of these bowls are given on fig. 4.

Section III. Bulbous Beakers Colour-Coated and Decorated *en barbotine*.

Fig. 2, **16** (1633), **7** (1601), **18** (1592), fig. 3, *d* (1606). Drinking vessels, as the most abundant, ornamental and varied class of Roman pottery, are also the most important for dating purposes. The development of the tall bulbous beaker with cylindrical neck and high foot of the third or fourth century (the class to which six of those under notice belong) is sketched in my *Silchester Pottery*, p. 103, and its descent from a globular beaker in Belgic *terra nigra* of the Augustan period is suggested by numerous dated examples in the Table of Standard Proportions III. The early and late forms overlap consider-ably. The taller the neck and the narrower the lip, body, and base, the later is the stage of development. **16** is of finer fabric than the others and may be imported Castor or Rhenish ware, being of thin hard reddish clay coated with dark grey glaze and decorated *en barbotine* in yellow slip. The others are of soft pale buff to reddish body clay, coated originally with dark slip or bitumen much rubbed off and discoloured by overbaking, showing them to be wasters.

17. The width proportions of this vessel are rim 46, bulge 56, base 28 per cent. of the height, indicating by the same table the third to fourth

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[1] *The Romano-British Town of Magna (Kenchester), Herefordshire*, by G. H. Jack and A. G. K. Hayter.

century as its probable date.   It is indented round the body with eight narrow vertical flutings or thumb impressions.

18. Width proportions, 45 : 67 : 27 per cent. of the height, respectively,
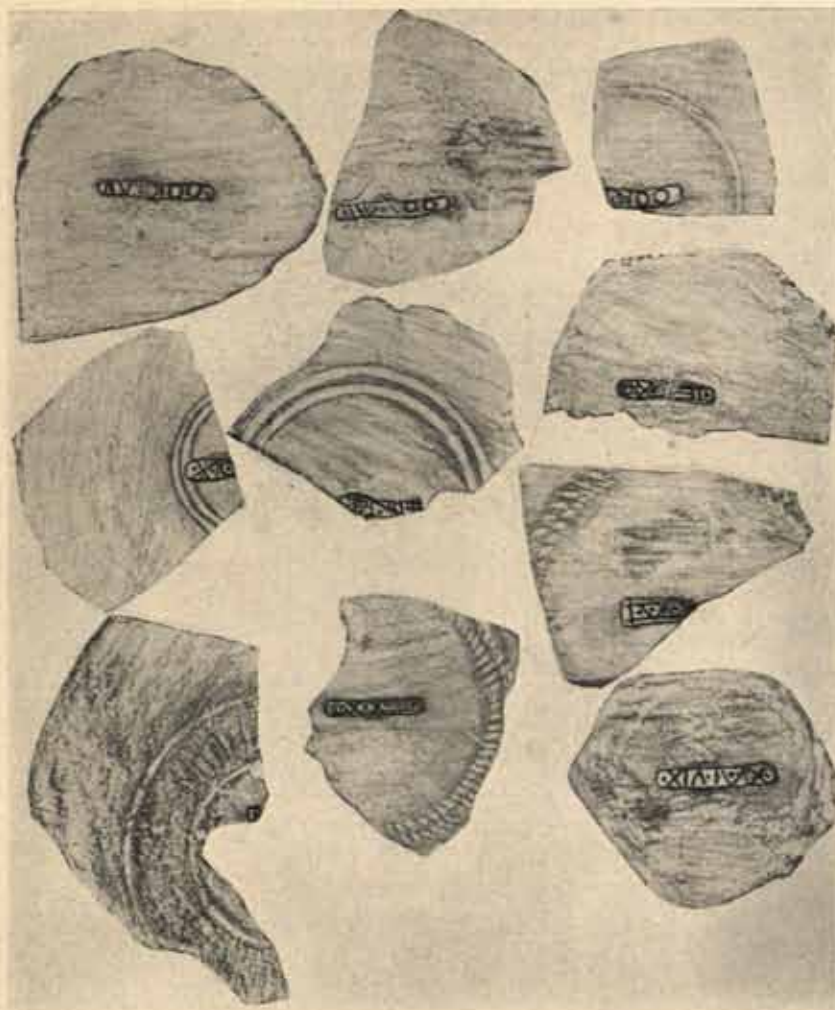
Fig. 4.   Potters' stamps on bowls : local fabrics (½).

indicate a date about A. D. 250.   There are three horizontal rows of roulette-notches on the upper portion of the bulge.

Fig. 2, **19.**   See p. 234.   Fig. 2, **20.**   See p. 241.

Fig. 3, *a–a.* Four beakers decorated *en barbotine* with S-shaped scrolls and fantastic animal figures in imitation of Castor (*Durobrivae*) or Cologne fabric.   Parallels from Silchester are *op. cit.*, p. 109, pls. XLIV B, XLIV A, and XLV, but they are different in clay and coating from those under notice.

Section IV. WHITE CLAY VESSELS, LAGENAE, FLAGONS, AND MORTARIA
OR PELVES, BOWL AND PEDESTAL.

The almost universal use of white or other pale clays for both handled flagons and *mortaria* or *pelves* suggests that they were used in conjunction as basin and ewer for ordinary ablutions by the Romans, who were a cleanly people provided with elaborate baths.

This conformity of colour is displayed by these Sandford examples, comprising two *lagenae* (two-handled), two flagons (one-handled), and thirteen *mortaria* or *pelves*, with only one exception in each category, viz. **24** flagon of pale tile-red clay, and **33** *mortarium*, tile-red, coated with cream-coloured clay slip. When tile-red clay was employed it was usually coated with white clay slip, which may be discerned in the crevices though often nearly all rubbed off. They are all with one exception fragments, neck and handle in the case of flagons and *lagenae*; rim-sections in the case of *mortaria*, the only salient feature by which they can be classified into separate types. The type numbers quoted are those specified for *mortaria* in *Silchester Pottery*, p. 150.

Fig. 5, **21** (1605). Neck and handle of *lagena* with mouthpiece four times out-stepped, widening downwards, and countersunk cordon at the root of the neck.

Fig. 5, **22** (1605). Neck and handle of small *lagena* or two-handled flagon with a ring moulding just above the upper attachment of the handles.

Fig. 2, **19** (1605) is from a one-handled flask or flagon with a similar disc on the neck found in the well, and there are ten similar specimens from Yewden in Hambleden Museum. The neck-ring also occurs frequently on the necks of flagons from the waste heaps beside the kilns in the New Forest (Sumner, *Earthworks of the New Forest*, p. 43, figs. 1–3 and *Ashley Rails*, p. 30, pl. IX, 11–13). A like example is recorded at Lowbury Hill, *op. cit.*, p. 68, fig. 18, no. 97, and stated to be not earlier than the third century and probably to belong to the fourth. The same feature appears early, 11 B.C.–A. D. 9, at Haltern, *op. cit.*, p. 232, type 52; A.D. 40–83 at Hofheim, *op. cit.*, p. 288, type 58, and is said by Ritterling to be in all cases copied from a bronze prototype on which the top of the handle is attached to the neck by a metal ring. On the late examples under notice it more resembles the catch-plate of an oil flask or stop-plate on a nipple used for drinking purposes.

Fig. 5, **23** (1605). Neck and handle of flagon. Mouthpiece four times under-stepped; two girth-grooves at the root of the neck. The lower end of the handle is partly attached by a tang thrust through the shoulder while still plastic. This occurs on two smaller flagons of later date found beside the kilns at Ashley Rails, New Forest (*op. cit.*, p. 29, pl. IX, nos. 5, 6), but is a Late Celtic device employed

on two jugs in Colchester Museum of that period described in our *Proceedings*.[1] A good example has also been found at Yewden.
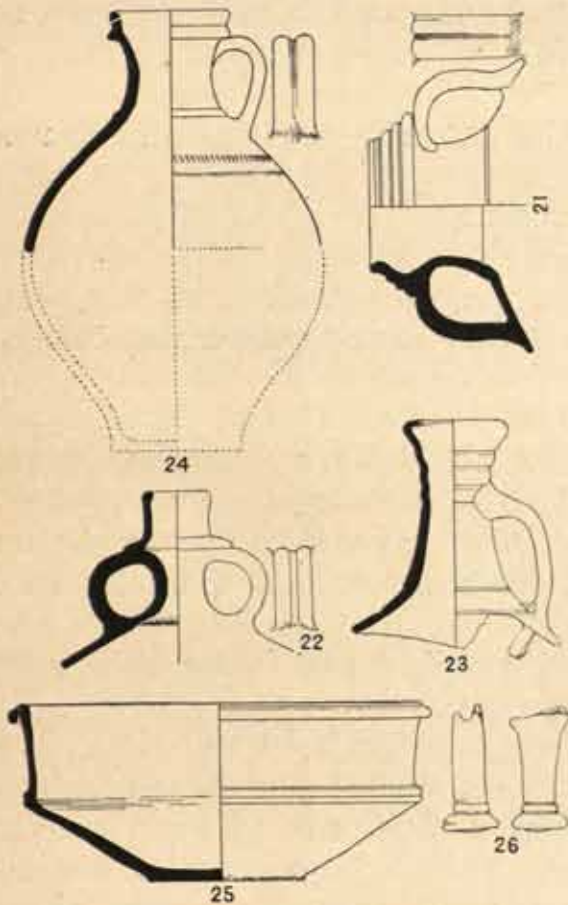
Fig. 5.   White clay ware, wasters (¼).
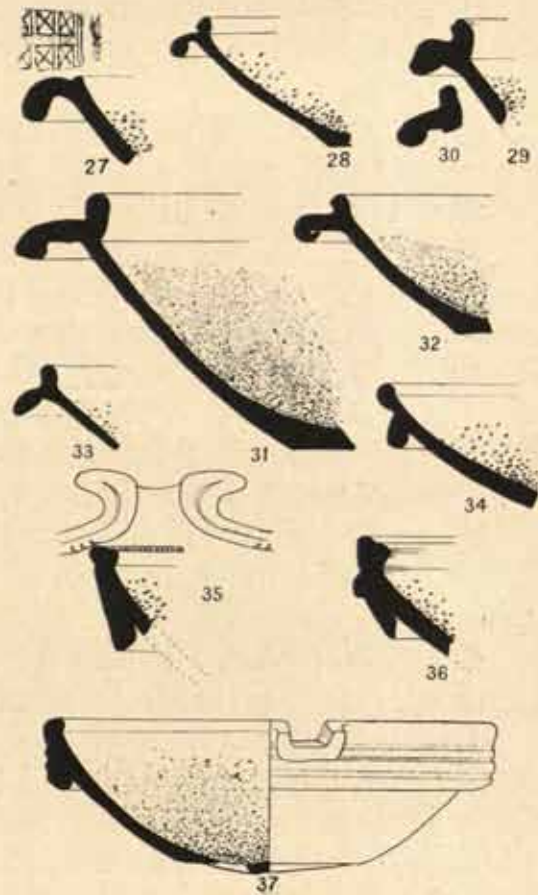
Fig. 6.   Various types of mortaria, wasters (¼).

Fig. 5, **24** (1605).   Neck and handle of flagon.   A cordon at the joining of neck and shoulder, and two rows of roulette notches on the latter.

Fig. 5, **25** see next page.   Fig. 5, **26** see p. 226.

Rim-sections of Mortaria.

Fig. 3, *i* (1564).   Flanged type 3*a* with characteristic almond-shaped section as if formed by folding in the outer margin, decorated on the surface with stamped crescents, S-shaped ornaments and punctures in rows.   Cf. *Silchester Pottery*, p. 153, pl. LXV, 134, 137, and *Ashley Rails*, p. 30, type B.

Fig. 3, *j* (1601).   Small fragment of outer margin, stamped with a row of circular gratings resembling the 'wafer pattern' on a Saxon urn from Islip, above mentioned, p. 232.

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[1] Dr. H. Laver, in an illustrated paper read 9th February 1905 (*Proceedings*, xx, 211).

Fig. 6, 27.   Bead and roll type 2 *b*, stamped across with a potter's trade-mark in the form of two rows of saltires.

Fig. 6, 28–33 are fragments of the flanged type 3 *a*, *Silchester Pottery*, p. 151, *Wroxeter Report* I, p. 80, fig. 20, types 126-62.

28 (1562).

29 (Poynetts).   The outer margin of the flange is of the plump almond-shaped section.

30.   This is of similar shape to the preceding.

31 (1563).   Of like shape.   Height 5¼ in., diameter about 15½ in.

32 (1561).   Of like shape.   Height 2⅞ in., diameter about 10 in

33 (Poynetts).   Of like shape.   Tile-red clay coated with cream coloured clay slip.   Original diameter about 10⅜ in.

Fig. 6, 34 (1564).   Type 3 *a* with down-bent flange.

The two following are of a local type 1 *b*, cf. *Silchester Pottery*, p. 150, and *Wroxeter Report* I, p. 80, fig. 20, type 222, dated A.D. 360–400.

Fig. 6, 35 (1564).   Type 1 *b* with upright collar grooved on the top edge and stamped on the inner margin with small crescents, original diameter about 14 in.

Fig. 6, 36 (1664).   Type 1 *b*.   The upright collar has a raised band round the middle, stamped with a row of small crescents.

The distinctive types of *mortaria* produced in Sandford and New Forest potteries are those with flanges ¼ to ⅓ an inch below the lip on the outside (1) in white clay scored with wavy lines or stamped with rows of small patterns, and (2) in fine tile-red clay coated with bright red clay slip sometimes painted on the top with rude patterns in white slip, or moulded into a variety of shapes. When recovered from future excavations the types may be illustrated usefully in section for reference and dating as characteristic specimens of fourth century wares.

Fig. 6, 37 (1557).   Whole vessel of hammer-head type 3 *b*, in use during the third and fourth centuries.   The base is outbulged owing to careless throwing and partly broken away.   Height 3¼ in., diameter of rim 9¼ in., and base 2¾ in. It is one of the types numbered 178-214 by Bushe-Fox, *Wroxeter Report* I, p. 80, fig. 20.   *Mortaria* with stamped patterns on the rim are among those from Silchester, *op. cit.*, p. 153, pl. LXV, type 134.   Flanged *mortaria* of parchment coloured clay made in the New Forest potteries are well illustrated by Mr. Sumner in his *Earthworks of the New Forest*, p. 38, figs. 12–18; p. 40, figs. 10–16, and attributed to the fourth to fifth century, and more fully in his later publication *The Roman Pottery made at Ashley Rails, New Forest*, p. 15, where he speaks of a variety of the *mortaria* rim sections, of which hardly two are the same.

Fig. 5, 25 (1581).   Portion of a bowl of well-known type ; the upper half

cylindrical on a conical base; the level rim moulded and undercut; the side-angle ornamented with a double cordon. Cream coloured clay.

Examples from the waste heap near the kilns at Silchester, *op. cit.*, p. 193, pl. LXXIX, type 6; and from York, *Catalogue of Museum*, p. 95, pl. XXII, 19, of late first and early second centuries.

The fine white clay used for flagons and, *mortaria*, perhaps of the kind generally known as Poole clay from the port whence it is largely shipped, is found in seams on the hill-sides in the New Forest, and is still employed in potteries at Verwood, near Fordingbridge, which is 4 miles to the west of the site of the latest discoveries by Heywood Sumner at Ashley Rails. Describing the pottery found there this writer illustrates the vessels accurately on a large and useful scale, and speaking of the ornaments upon them, with artistic insight states that their motives of decoration did not spring from enjoyment of surrounding nature, and the potters had lost the Late Celtic mastery of abstract line ornament, but they had fine perceptions of scale, spacing, and restraint.

From an examination of the Sandford pottery the same conclusion has been drawn. The art of the potter was implicitly imitative and, though Late Celtic and North Italian motives and traditions still survived, the intrusion of Teutonic or other barbarous North European invaders had begun to influence it.

Section V. DISCOLOURED AND DISTORTED VESSELS OF ORDINARY CLAY, PRINCIPALLY WASTERS.

It will be perceived from what has been already said that the value of the Sandford discoveries lies in the evidence for dating they afford as to the late Roman period. This equally applies to the rougher sorts now to be described.

The remaining coarse pottery of local manufacture consists chiefly of discoloured, flawed, or overbaked vessels of ordinary use. The colour of their body clay may be accidental, and need not be separately specified. The majority still retain their original shape, having been skilfully restored at the museum, and they show that the Belgic influence, that of the Belgic tribes, the Regni, the Atrebates, the Belgae, etc., who preceded the Romans, was strong at Sandford, as at Yewden and Silchester, and they are in consequence important specimens ethnographically and historically. It may be stated generally that they are composed of hard fumed grey body clay with a darker surface; the grey colour of the clay being due to the action of carbonyl gas (carbon monoxide), one of the products of imperfect combustion, in a 'smother-kiln'. Whether the darker surface coating is due to the same influence or to a thin film of melted bitumen laid on while the vessel was hot from the kiln, as practised in the case of the better class of Belgic ware manufactured at Trèves in the last century B.C. and first century A.D., remains uncertain.

Fig. 7, **38**.   Globular narrow-necked olla decorated with alternate bands of hot polished bitumen and white clay slip.   Hard smooth grey clay.

It may be compared with another large olla of similar form and decoration
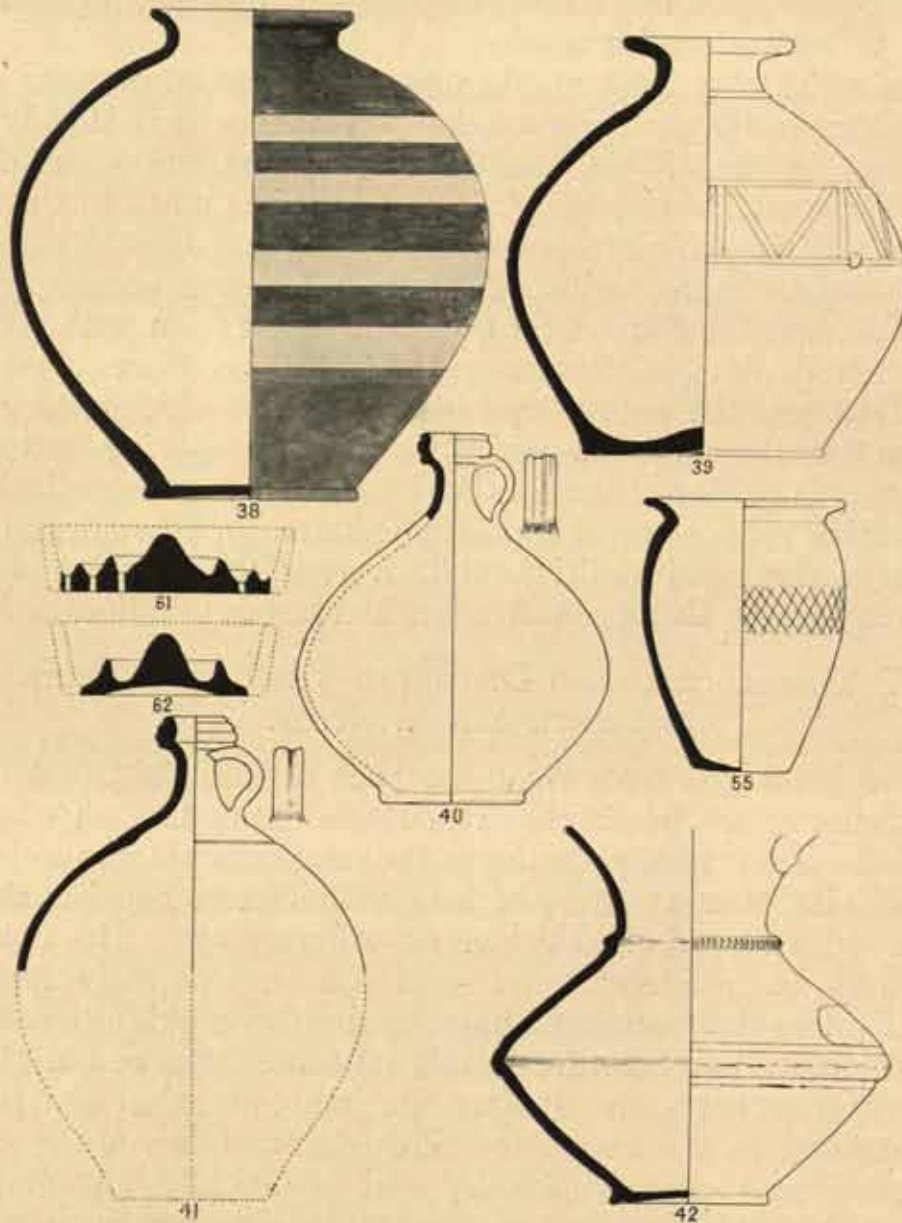
Fig. 7.   Various types, principally wasters (⅓).

in the museum (A 1685) which has a cordon notched diagonally at the joining of neck and body suggesting a descent from the Glastonbury olla, found also at Hengistbury Head, Bushe-Fox, *Report*, p. 41, pl. XX, 1.   Parallel examples have been found at Silchester, *op. cit.*, p. 167, pl. LXIX, B; at Dunmore Park, Essex, *Colchester Mus. Report*, 1909, no. 1581, pl. V; and similarly ornamented

bottles, with black and white zones alternating, from Strood, Kent, are in the Wickham collection, Maidstone Municipal Museum, *Collectanea Antiqua*, i, **17**.

Fig. 7, **39** (1538). Boldly outbulged wide-based bottle without handle, decorated with a cordon at the joining of neck and body and a groove-bordered zone of vertical and oblique incised grooves in form of the letter M. A lump of clay adhering to the side and a dent therein made before baking show it to be a 'waster'.

Parallel examples: Silchester, *op. cit.*, p. 165, pl. LXVIII, type 147, end of first century; *Mainzer Zeitschrift*, year 1912, p. 101, fig. 10, no. 15, Belgic *terra nigra*, dated in first century.

Fig. 7, **40** (1548). One-handled flagon with narrow neck, wide mouthpiece thrice understepped, and two-ribbed handle. Rough slate-grey clay.

Fig. 7, **41** (1544). Neck and handle and portion of body, to about the middle, of a one-handled flagon, with mouthpiece thrice outstepped (widening downwards), and a girth-groove at joining of neck and body. Found in the well. Belgic technique.

Fig. 7, **42** (1603). Neck of ewer with wide trumpet-shaped opening and sharp-angled biconical body in imitation of a metal prototype. The sizes of the attachments show that it had a wide band-handle expanding downwards. Rim wanting. A cordon at the joining of neck and body is cut across with deep notches. The angle of the bulge is bordered above and below by girth-grooves, and the underbase grooved and hollowed. Pale buff clay.

A parallel in white pipe-clay from potteries at Cologne: Behn, *Röm. Keramik*, 1738, form 52, is referred to the La Tène period by the form of handle. Cf. *Hengistbury Head Report*, p. 46, pl. XXIV, 24.

Fig. 8, **43** (1597). Small globular-bodied beaker with cylindrical neck (rim wanting), decorated with two zones of little clay studs arranged in diagonal rows forming lozenge-shaped groups. Pale grey ware.

Fig. 8, **44** (1598). Upper portion of beaker of 'poppy-head' type, with cordon at joining of neck and body, similarly decorated with clay studs. Found in the well.

Similarly ornamented vessels are recorded at Silchester, *op. cit.*, p. 169, pl. LXX, nos. 157–60; *Wroxeter Report* II, p. 49, pl. XV, no. 13, dated A.D. 80–120 to 130; Walters, *Cat.*, M 2644, fig. 272 (Upchurch ware of first century).

Fig. 3, *h* (Poynetts). This is a small fragment of similar description decorated with a triangular group of small studs *en barbotine*.

Fig. 8, **45** (1589). Beaker of 'poppy-head' type scored with slight grooves round the outside of the neck and a single groove below the middle of the bulge.

Fig. 8, **46** (1599). Tall indented conical beaker with four deep indentations

on opposite sides, widely outcurved overhanging rim, high shoulder, and narrow base on an oblique foot.   Slate-grey clay.

The body has been sharply incised with horizontal lines on the inside apparently to facilitate the indenting of the sides.

Another example of this peculiar form in Maidstone Museum from Strood, Kent, is recorded in *Collectanea Antiqua*, i, 17.

Fig. 8, **47** (1551). Small globular-bodied beaker with narrow oblique rim and foot.   Pale buff clay with reddish core.

Six small beakers have the S-shaped opening, outbulged body with girth-
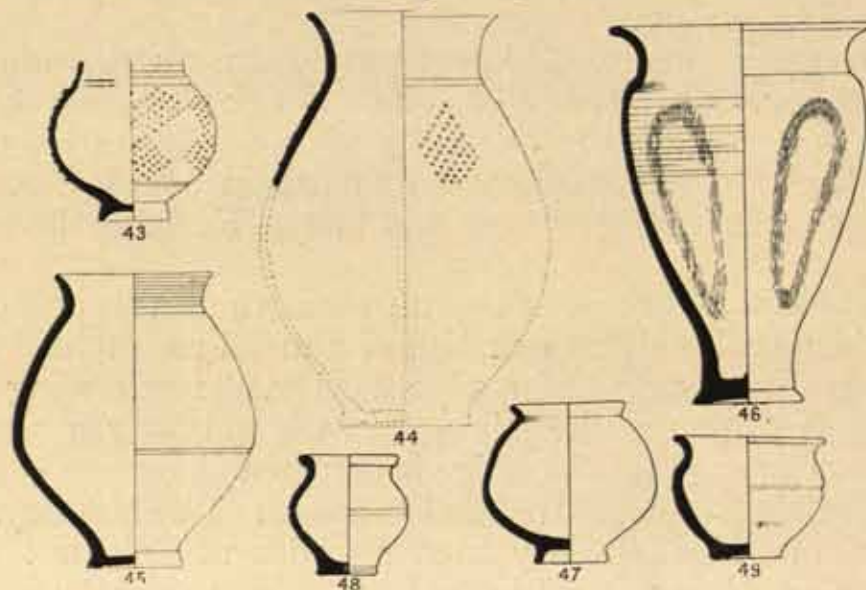
Fig. 8.   Various types of beakers, principally wasters (⅓).

grooves round the middle, and moulded foot-ring, of Late Celtic (La Tène) type which survived on originally Belgic territory to the end of the first or beginning of the second century.

Fig. 8, **48** (1547). Small beaker with S-shaped side. Clay brownish grey with dark coating.

Fig. 8, **49** (1649). Small beaker with S-shaped side. Clay reddish buff with pale pinkish red slip.

A small projecting stone in the clay caused its rejection.

Fig. 9, **50** (1550). Small beaker with S-shaped side. Pale buff terra-cotta.

Fig. 9, **51** (1545). Small beaker with S-shaped side. Smooth pale buff terra-cotta.

Several specimens of the same type of bowl have been obtained at Yewden and Silchester, *op. cit.*, pp. 173, pl. LXXII, 171; pp. 193–4, pl. LXXIX, 5, 14 (products of local kiln); and fragments at Lowbury Hill, *op. cit.*, p. 65, fig. 18, nos. 63, 64.

Fig. 9, **52** (1534). Deep wide-mouthed bowl, boldly outbulged, with S-shaped side, thickening to a nearly square-edged rim, a slight offset at the joining of neck and body, and two girth-grooves round the middle.

Rough and discoloured by overbaking and distorted to a rough oval shape, showing it to be a 'waster'.

A prototype of North Italian origin found at Hengistbury Head, *op. cit.*, p. 34, pl. XVII, nos. 3, 6, belongs to the La Tène or Prehistoric period.

Fig. 9, **53** (1546). Small olla-shaped beaker. A quantity of adhering sand on the base shows it to be a 'waster'.

Fig. 9, **54** (1591). Olla with square-edged lip. Lop-sided and evidently
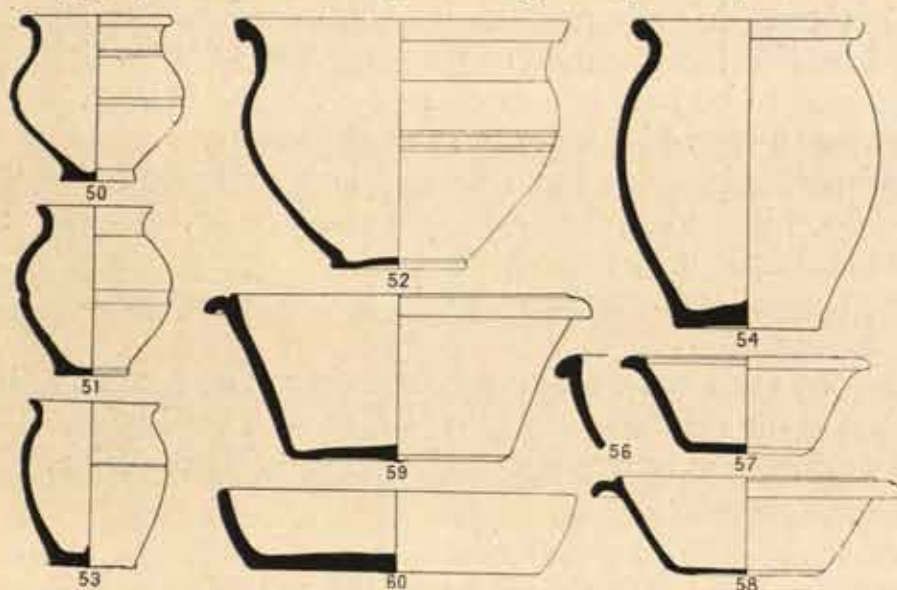
Fig. 9. Various types of beakers and bowls, wasters (¼).

a 'waster'. One of similar shape found at Wroxeter, *Report* II, p. 52, and fig. 19, type 60, is dated in the late second or early third century.

Fig. 7, **55** (1590). Olla with 'cavetto' rim, decorated with a zone of latticed lines an inch wide scored with a blunt point. Lop-sided and evidently a 'waster'.

Of the latest type, resembling examples found at Yewden containing coins dated to about A.D. 317–26; at Westbury, with coin of Constantine I, A.D. 306–37; Wroxeter, *Report* II, p. 53, and fig. 19, type 67; Silchester, *op. cit.*, p. 160, pl. LXVI, type 197.

Fig. 9, **56** (Poynetts). Rim-fragment of round-sided bowl with slightly-drooped, heavily-beaded rim.

Fig. 2, **20** (1602). Small mug with handle and double-beaded lip. The lower portion is slightly outbulged on an extended foot. It is of hard reddish buff clay and coated with dull red to black slip.

Fig. 9, **57** (1576).   Small flat dish or porringer with flanged rim and straight side bevelled at its lower margin to admit the tip of the fingers.

The black coating appears to contain graphite (black lead).

Fig. 9, **58** (1575).   Flat dish or saucer with more pronounced rim and curved flange.

Fig. 9, **59** (1573).   Steep-sided dish or porringer with flanged rim.

A projection in the base due to careless throwing causes it to stand unsteadily, and shows it to be a 'waster'.

Fig. 9, **60** (1588).   About half of a flat plate or saucer with sloping slightly curved side.

Fig. 7, **61** (1603).   Middle portion of a shallow dish, consisting of a central cone encircled by two less prominent rings (a third outer ring or upright side wanting), supposed to be part of a cheese press.   The base between the three rings is pierced with nine $\frac{1}{8}$-in. holes, arranged radially.

More complete examples have been found at Wroxeter, *Report* I, p. 75, fig. 18, no. 38; Toothill and Melandra, *Report*, 1909, p. 32, pl. 9, fig. 1; Castlecary on the Antonine Wall in Scotland, *Proc. Soc. Antiq. of Scotland*, vol. xxxvii, p. 335, fig. 34; Castor (*Durobrivae*); York, *Catalogue of Roman Pottery*, p. 96, pl. XXII, fig. 20, etc.

Fig. 7, **62** (1603 A).   Central cone and one ring of a somewhat similar vessel, with base domed in the centre to a height of $\frac{3}{16}$ in., but unpierced.   This omission by a careless workman may have been the cause of its rejection.

LIST OF ILLUSTRATIONS

XII. *Bath Inn or Arundel House.*

By CHARLES LETHBRIDGE KINGSFORD, *Esq., M.A., Vice-President.*

Read 18th May 1922.

THE bishop of Bath's Inn had a larger site than any of the episcopal palaces on the Strand. The frontage to the river was over 500 feet, that towards the street somewhat less, and the depth must have been upwards of 400 feet. Thus the Inn with its precincts covered an area of between four and five acres. The site of Durham Inn with a similar frontage was much less in depth. But Durham Inn itself in the middle ages far surpassed Bath Inn as a building, though the additions made to the latter after it ceased to be a bishop's inn made it eventually the more splendid. It is in its last days as the earl of Arundel's place that Bath Inn is of most interest both for its buildings and history.

The history of the site can be carried back to a time before it came into the possession of the bishops of Bath and Wells. At some date before 1221 (and probably early in the reign of King John), Henry, son of Reiner, granted to Eustace de Fauconberg the land which he held of the fee of Robert de Harocourt in the parish of St. Clement Danes, together with the land which was Richard le Fruiter's, saving to William the Carpenter the three messuages which he held.[1] In 1221 Eustace de Fauconberg became bishop of London; before his death in November 1228 he granted this land to Joscelin, bishop of Bath and Wells. Joscelin was not only the creator of the cathedral at Wells, but was also the first builder of the house of his see in London. On 21st September 1232 he granted to his successors at Bath and Wells a place formerly belonging to Eustace, bishop of London, in the street of St. Clement without the Bar of the New Temple together with all houses and buildings thereon.[2] About the same time he obtained from William, the proctor of St. Bartholomew's Hospital, a demise of a quit rent of 10s. charged on the bishop's messuage in the parish of St. Clement Danes on the south side of the

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[1] *Ancient Deeds*, A. 1665. See p. 276, below. William the Carpenter's land may possibly have been the piece immediately east of the north end of Strand Lane, which never formed part of the bishop of Bath's lands.

[2] *Cal. Charter Rolls*, i, 168–9; the grant was confirmed on 23rd September. The original adds nothing to what is given in the Calendar.

church towards the Thames.¹ In 1237 Bishop Joscelin granted his servant Geoffrey the keepership of his hostel at a fee of 4*l.* 11*s.* yearly; Geoffrey was to answer for the rents and to keep the buildings in repair at the bishop's charges.² Thus Bath Inn, like the neighbouring Inns of the bishops of Carlisle and Durham, will have dated from the early part of the reign of Henry III. Exeter Inn, which adjoined it on the east, was nearly a century later in date.

When Bishop Joscelin died in 1242 his house in London was granted by Henry III during the vacancy of the see to his Queen's uncle Peter of Savoy.³ From that time till near the end of the fifteenth century we have only passing references to the bishop of Bath's Inn. In 1312 the bishop of Bath made complaint of certain persons who with false keys had opened the door of his cellar in St. Clement Danes and carried away his wine and goods.⁴ At dusk on 20th July 1324 John de Wodehay, rector of Hartley near Basingstoke, was going with a knight called Francis de Vilers to the bishop of Bath's Inn; they fell to quarrelling on the way and drew their swords with the result that the parson mortally wounded the knight.⁵ In 1338 there is reference to a wall between the tenements of Bath Inn and Exeter Inn,⁶ and forty years later to the bishop of Bath's Inn without Temple Bar.⁷ In 1383 Walter Skirlaw, who was afterwards for a short time (1386–8) bishop of Bath and Wells, but was then keeper of the privy seal, was lodged at Bath Inn. After midnight on the Eve of St. George (22nd April) one William Bridport, instigated by John Bures, Prior of Crutched Friars, and others, broke into the Inn and carried away silver vessels belonging to Skirlaw to the value of 600 marks.⁸ Though our knowledge of the early history of Bath Inn is so meagre, it was clearly a good house; for when in 1424 the Drapers were new building their Hall in St. Swithin's Lane they appointed some of their brethren to visit Bath Inn, presumably as furnishing a good model.⁹ At an Inquisition held after the death of Bishop Bubwith in 1425, the bishop was stated to have held in right of his see a hospice and twenty small tenements thereto annexed, the hospice being of no value beyond reprises, whilst the clear annual value

¹ *MSS. of Wells*, i, 474 (Hist. MSS. Comm.). The deed is printed in Dr. N. Moore's *History of St. Bartholomew's*, i, 392. The date is fixed by its attestation by Andrew Bukerel as mayor, i.e. between 1231 and 1238.

² *Cal. Charter Rolls*, i, 235. The record is imperfect; but it clearly relates to a keepership of the type usual in the case of such London hostels.

³ *Cal. Close Rolls*, 1242–47, p. 78. ⁴ *Cal. Pat. Rolls*, Edward II, i, 530, 532.

⁵ *Calendar of Coroners' Rolls, London*, p. 92. ⁶ *Cal. Pat. Rolls*, Edward III, iv, 127.

⁷ *Cal. Close Rolls*, Edward III, xiv, 455.

⁸ *Cal. Pat. Rolls*, Richard II, iv, 429—Date 1391, when Bures obtained pardon for his share in the transaction.

⁹ Johnson, *History of Drapers' Company*, ii, 301.

of the tenements was 6*l*. 13*s*. 4*d*.[1] These tenements, as we shall learn, were along the Strand frontage. Bubwith's successor John Stafford is twice recorded as executing deeds at his Inn in London.[2] Otherwise we have no more history till near the close of the fifteenth century, and what we get then relates to the custody of the Inn, and the leasing of the tenements annexed thereto.

'Bathe Inne', or the hospice of the lord of Bath without Temple Bar, was leased to John Morcote for life on 13th April 1493. Morcote was no doubt keeper, but we have no information as to the terms on which he held his office. When, however, in 1509 the keepership of the Inn was granted to William Clarvys, he received also the mansion annexed thereto, which Richard Takyll held, and all commodities and profits of the orchards and gardens of the said hospice, and also the office of receiver of the rents of the bishop's tenements which were annexed to the hospice; he was to have for wages 2½*d*. a day and a robe of the suit of gentlemen in the bishop's service at Christmas or as often as the bishop gave a livery of this kind; he was also to have a dish of food with convenient bread and drink whenever the bishop or his successors were in residence at the hospice. If the rent fell into arrear Clarvys was empowered to distrain on the bishop's tenements called 'le Cardinallis Hatt' and 'le Tabard', being parcel of the tenements in St. Clement Danes.[3] There is a reference to these two tenements about this same time in a Chancery suit, where one William Merston alleged that on his marriage to Elizabeth, daughter of John Chace, the said John had promised to make a settlement of such right as he had in two tenements in the parish of St. Clement without Temple Bar, the one called the Tabard and the other the Cardinal's Hat.[4] The Cardinal's Hat probably owed its name to the Italian Cardinal Adrian de Castello, who was bishop of Bath and Wells from 1504 to 1521. It was, as we shall see, the last of the bishop's tenements towards the west; the Tabard probably adjoined it towards the east; just in this position at the beginning of the eighteenth century we find an inn called The Talbot; remembering how in the case of the more famous Southwark Tabard the name was corrupted to Talbot, we may I think identify the Tabard in St. Clement Danes with the later Talbot[5]; but if this identification is accepted the Tabard and Cardinal's Hat must have subsequently been alienated, since the Talbot did not form part of the appurtenances of Arundel House.[6]

Between 1509 and 1511 we get reference to a number of the bishop's

[1] *Escheator's File*, 1019/4 at P. R. O.   [2] *Cal. Pat. Rolls*, Henry VI, ii, 180, iii, 24.
[3] *MSS. of Wells*, ii, 128, 215 (Hist. MSS. Comm.).   [4] *London Topographical Record*, vi, 83.
[5] The name of the Tabard in Gracechurch Street was similarly corrupted. The corruption is from 'Talbard' a variant of 'Tabard' (*N. E. D.*). Strype describes the Talbot Inn as 'well resorted unto'.
[6] See more fully on p. 263, below.

tenements in the Strand. At the extreme east adjoining a tenement of the bishop of Exeter was the tenement of Oliver Morryell, next to it on the west were two tenements in the holding of Peter Hughson, and then the tenement of Nicholas Haddef.[1] This was in December 1510; in the previous year John Eddis held a tenement immediately east of the Gate. Haddef and Eddis may have been successive tenants; if they were not there must have been six tenements on the east side where in 1590 there were only four. On the west side of the Gatehouse was the messuage and garden of John Coke, followed by the tenements of Thomas Ferlyng, John Dykenson, Thomas Hunter, and Henry Savell. All these appear in 1509–11, and a later deed in 1545 indicates that they were consecutive.[2] The deed of 1545 shows that the tenement of John Towerson was the seventh on the west side; the corresponding tenement in 1590 was the sixth; probably on this side also the number of separate houses was reduced between 1545 and 1590.[3] The last tenement on this side in 1511 was the Cardinal's Hat, which is described as lying between the Cardinal's tenement where William Potter dwelt on the east, and a tenement of John Lovell's where Peter Forton, bookbinder, dwelt. These tenements are of some interest for the later history of Arundel House, but the description of their southern bounds is of more importance. Morryell's and Hughson's tenements had the Cardinal's stable on the south, whilst Coke's and Hunter's tenements were bounded by the wall of the place and hall of the mansion of the Cardinal; the southern boundary of the Cardinal's Hat is given as the wall of the Cardinal's place and the wall of Strand, the latter I suppose meaning the wall of Strand Lane.[4] To the exact significance of these bounds I shall return later.

Of somewhat more interest is the grant which on 1st July 1513 was made to Mr. Jerome Vergil, for his good service to the bishops and to the cathedral churches of Bath and Wells, of the office of keeper of the Inn together with the mansion which William Clarvys held, lying between the tenements of John Eddis on the east and John Coke on the west.[5] Jerome Vergil is no doubt the brother of Polydore Vergil the historian; Polydore was archdeacon of Wells and his brother was an Italian merchant, who is known to have been for some time resident in London. Jerome Vergil received the same salary and allowances as his predecessor.

Adrian de Castello was succeeded as bishop of Bath and Wells in 1521

[1] *MSS. of Wells*, ii, 215, 222. The lease to Hughson was dated 22nd December 1510. Morryell's own lease on 27th June 1510 gave Margaret Kefe as his neighbour. Both leases were recited in 1545. See p. 249 and p. 261, below. Widow Kene or Keue appears as holding a house here in 1567–8.

[2] *Ibid.*, ii, 227, and *Letters and Papers, Henry VIII*, xx (ii), 910 (77), see p. 249, below.

[3] See pp. 260–1, below.

[4] *MSS. of Wells*, ii, 222, 225, 227.

[5] *Ibid.*, ii, 232–3.

by Cardinal Wolsey, who held the see only two years. During his time the King and Queen of Denmark visited England and were lodged for a week at the end of June 1523 at Bath Place.[1] Under the next bishop, John Clerk, we begin to get a little more precise reference to the Inn itself. Clerk was more a diplomatist than a bishop, and was frequently employed on the King's business at Rome and in France. In September 1528 he was at Paris with Cardinal Campeggio on his way to England. He wrote thence to Stephen Gardiner: 'I assure you that lewd knave Jamys, that nevyr ded good, hath so paynted Norwiche Place to the Cardynall that it semyth that logyng hym ther ye wold have logyd hym in a pygge stye.' The Cardinal must therefore, he wrote, be lodged in Bath Place, though Durham Place would have been better as the goodlier house. Clerk would not, however, tell this to Campeggio, lest he might be thought unwilling to let him have his own house. 'If there be no remedy bute that the Cardynall shall lye in my house, I must take patiens, bute it is a strange reconnyng that seeyng that ther be other housis better than myn that men canne not be content with theym.' He was troubled where he himself was to be lodged.[2] However, he had to put up with the inconvenience, and Campeggio during his stay in England for the trial of Catherine of Aragon was housed in Bath Place, whence he wrote in August 1529.[3]

One of the last acts of John Clerk in relation to Bath Place was to make a grant on 1st March 1534–5 to his mother Anne Brownewich or Bromewich for a term of 61 years of the office of keeper of the house and receiver of the rents of all the tenements thereto belonging, with the wages of $2\frac{1}{4}d$. a day, a yearly fee of 6l. 13s. 4d., a robe or livery, and for her dwelling the house by the inner gate with the garden and tenement abutting on the king's way. From this it would appear that either Alice Bromwich had married again or that Clerk was not the bishop's ancestral name; Alice Bromwich must have been an elderly woman in 1535 since the bishop himself was over fifty. In 1590 her rights were vested in Isabell Saint Aubyn, widow of William Saint Aubyn, who was possibly her daughter, but more probably a grand-daughter.[4]

One incident of the Reformation was the appropriation by greedy nobles of the attractive episcopal places on the Strand. The necessary Acts of Parliament gave a specious reason: in 1539 the king desiring to have his nobles near him, where they might with more ease give him diligent attendance, and considering that William, earl of Southampton, High Admiral, had no convenient

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[1] *Letters and Papers, Henry VIII*, iii, 3153; Stow, *Annals*, 519.

[2] *Ibid.*, iv, 4753–4; two letters both dated 18th September, the one from Paris, the other from Luzerche (Luzarches), twenty miles north. See also the originals.

[3] *Ibid.*, iv, 5820.   [4]

mansion place of his own near the king's palace, granted him 'the chief mansion place or capital messuage called the Bishop of Bathe's place with all and singular houses, edifices, buildings, courts, orchards, &c.' Bishop Clerk, who ten years before had written that 'as pore a man as I ame wold gladly loge with some comodyte', had to accept in exchange a much inferior dwelling place at the Minories in the east end of the City.[1]
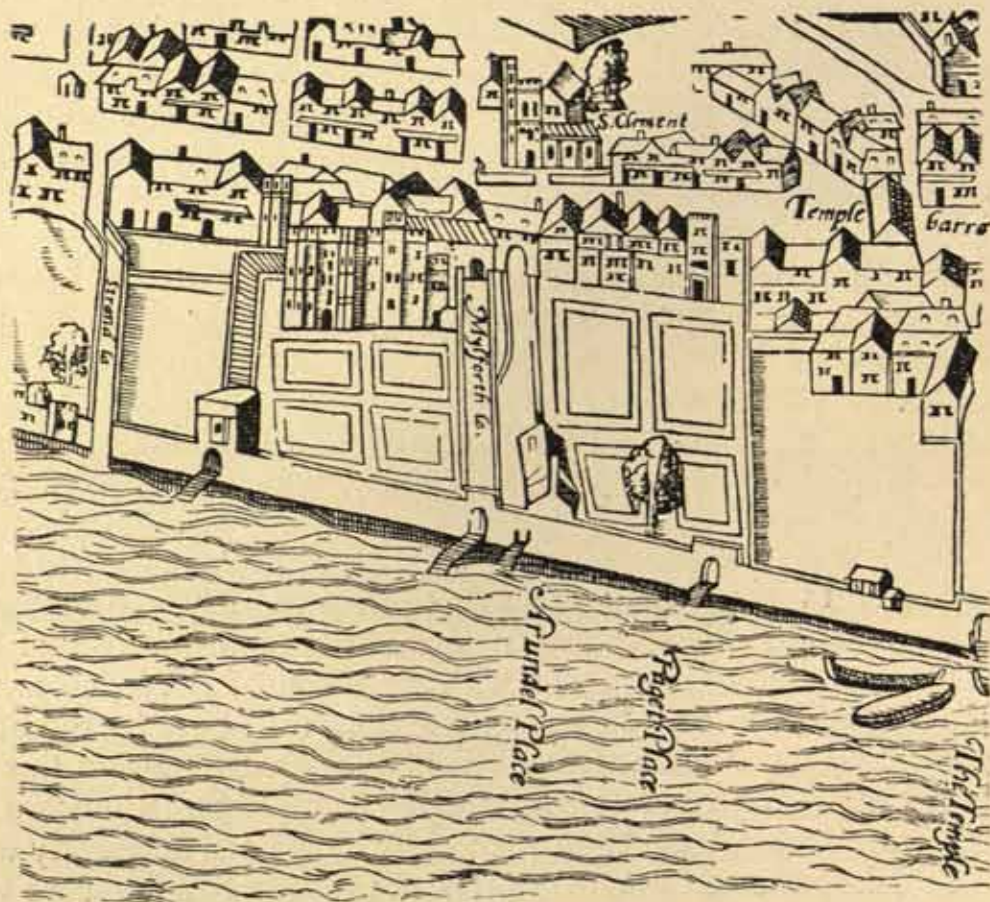
Fig. 1.　Arundel House and Paget Place, from the Agas map.

William Fitzwilliam, earl of Southampton, owned Bath Place for three years. During this time it was called Hampton Place, but otherwise there is nothing to record beyond occasional meetings of the Council there.[2] When the earl died without issue in October 1542, Bath Place, under the terms of the grant, lapsed to the Crown. The duke of Norfolk, who had no place of his own in London, sought to obtain it.[3] But eventually on 29th November 1545, the chief mansion and messuage called Hampton Place or Bath Place, with a mes-

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[1] *Letters and Papers*, xiv (i), 868 (13), see also original.
[2] *Ibid.*, xiv (ii), 48; xvi, 1428, 1463.　　　　　　　　　[3] *Ibid.*, xvii, 997.

suage called the Keeper's House and other tenements, all formerly held by the bishop and by Southampton, were granted in fee for 700*l*. to Sir Thomas Seymour, one of the uncles of the future Edward VI. The grant includes a long recital of tenements on the Strand, but some of the particulars are obviously inaccurate, and the only useful information to be extracted is that two tenements on the west side of the Gate butted on the Surveyor's Chamber.[1]

The house now once more changed its name and was known as Seymour Place. Thomas Seymour is said to have in great part rebuilt the house. What he did was probably to erect the extensive blocks stretching from the south-west corner of the old house and down to the river, whilst preserving the ancient courtyard and hall. This wing was so large and sumptuous that it may perhaps be doubted whether it was completed during the four brief years that Seymour lived here.[2] Still here was his residence next door to the even more splendid palace which his brother the Protector was building at Somerset House. Here after the death of Henry VIII Queen Catherine Parr lived with her new husband, and with him lodged for a time Lady Jane Grey, and here the Princess Mary visited him in the autumn of 1548. When Durham Place was taken for the Mint and the Princess Elizabeth was left houseless, Seymour offered her a home. It was at Seymour Place that 'he did use to come up every morning in his night-gown, barelegged in his slippers, where he found usually the Lady Elizabeth up at her book: and then he would look in at the Gallery Dore and bid my Lady good-morrow and so go his way'. Here also he was guilty of the more unseemly familiarities, which gave colour to the charge that he aspired to marry the Princess and contributed to his downfall. But of the house itself at this time we get no more than a few allusions to occurrences which happened in the Gallery,[3] no doubt a part of the new wing that was then built or building.

Thomas Seymour was arrested at his house near Temple Bar on 17th January 1549, and was executed on Tower Hill on 20th March. The house now once more fell to the Crown, but was almost at once purchased by Henry Fitzalan, earl of

[1] *Letters and Papers*, xx (ii), 910 (77). The recital is based on a variety of leases, and in some cases includes leases relating to the same tenement; thus the tenement on the west side of Osboston or Towerson (see p. 271, below) appears as occupied by three different tenants; the 'Cardinal's Hat' is described from the grant of 1511; the tenements of Morryell, Hughson, and Haddef are given as in 1510, but the list begins with different leases of the same tenements. Comparison with the original shows two inaccuracies in the printed summary; the tenements of Ripley and Porchett had Osboston's on the *West* and Hunter's on the *East*; Andrews's second messuage had his first on the *West* and Towerson's on the *East*. The original incorrectly states that Morryell's tenement had a tenement of the bishop of *Bath and Wells* on the east (see p. 246, above).

[2] It is shown very rudely by Agas, but does not seem to appear in Van den Wyngaerde's imperfect drawing.

[3] *Burghley Papers*, 68, 73, 76, 80, 89, 96, 99.

Arundel, it is said for 41*l.* 6*s.* 8*d.*[1]   In the possession of himself or his descendants, with the exception of a period of less than twenty years, the house or its site has remained till this day.   Henceforth it was called Arundel House, though in the earlier years it is still occasionally referred to as Bath Place.   When the earl fell out with John Dudley, earl of Warwick, in 1550, he was for a time commanded to keep his house in London, and a year later was committed to the Tower.   When at last he obtained his release on 3rd December 1552, we are told that he went from the Tower to his place by the Strand.[2]   In the following year Arundel had a foremost share in obtaining the crown for Mary.   When Stephen Gardiner was released from prison on 9th August 1553, Arundel received him and brought him 'to dener to Bayth plasse'.[3]   His grandson and heir, Philip Howard, son of his daughter Mary, who had married the duke of Norfolk, was born at Arundel House on 25th August 1557,[4] and a few weeks later his second countess died there and was buried at St. Clement's Church.   Under Elizabeth, Arundel for a time, in spite of his religious opinions, retained his place at Court.   But his financial affairs were embarrassed and on 9th January 1559 he demised a great part of his estates on lease for 100 years to another son-in-law, John, Lord Lumley.   As a consequence we find Lumley concerned with the tenements belonging to Arundel House.   But when the young Philip Howard was espoused to Anne Dacre in 1570 Arundel Place with the lands and tenements were assured to him and his wife for their lives.[5]

In the autumn of 1565 the Margrave of Baden and his wife Cicely came to England.   Cicely remained in London throughout the winter and was eventually lodged at Arundel House.   On 31st March 1566 it was reported that the Margrave had again 'adventured to come over disgysed like a mean man and his beard cutt'.   He came to Arundel House where his wife lay 'and there hath bene the most parte of this weke past'.[6]

The earl of Arundel was under restraint at his house in London in 1564 and 1569, and though he avoided committing himself during the Northern Rebellion in the latter year, his position was growing difficult.   In 1571 together with his son-in-law, the duke of Norfolk, he was implicated in Ridolfi's Plot, which led to the Duke's attainder and execution.   Arundel himself was once more confined for a year to his London house.   Afterwards from time to time he attended the Privy Council, but lived generally in seclusion, till his death at Arundel House on 24th February 1580.   Shortly after the earl's death, when

[1] Strype, *Survey*, iv, 105.   [2] Wriothesley, *Chronicle*, ii, 33, 79.   [3] Machyn, *Diary*, 40.
[4] The Duchess Mary died at Philip's birth and was buried at St. Clement Danes; 12*s.* was paid for her vault, and 59*s.* 6*d.* for the velvet pall which lay on her hearse. *Churchwardens' Accounts.*
[5] See p. 273, below.
[6] *Cal. State Papers*, 1566–70, p. 4, and originals; Stow, *Annals*, p. 1116, ed. 1605.

Mendoza the Spanish ambassador was coming to London, the Lord Mayor was instructed to find him a residence and procured a house in Fenchurch Street, which Mendoza did not like and desired to have Arundel House as being a nobleman's house and without the City.[1]

Philip Howard, who had forfeited his paternal titles and estates by Norfolk's attainder, succeeded his maternal grandfather as earl of Arundel under a cloud. His wife was a woman of strong religious feeling, and in 1582 openly professed Romanism. The earl was himself out of favour at Court, though in 1583 Queen Elizabeth visited him at Arundel House, where he made her a very great and sumptuous banquet wherewith at that time she seemed contented. But Elizabeth's suspicions were not appeased, and not long after the earl was commanded to consider himself a prisoner in his own house.[2] Then Arundel also became a devout Romanist, and finally in April 1585 attempted to escape from England. He was arrested and sent to the Tower, where he spent the remainder of his life. At first no definite charge was brought against him; but at length in April 1589 he was found guilty of treasonable practices and attainted. The night before he was condemned 'a nightingale was heard to sing with great melody in a jessamine tree in the garden of Arundel House, where his countess and children did remain', a thing neither before nor since heard in that place.[3] Earl Philip, though sentenced, was never executed, and died in the Tower on 19th October 1595.

Though this history is not directly concerned with Arundel House, it is the necessary prelude to what follows. After 1585 the Countess Anne had been allowed from time to time to live at Arundel House, though receiving peremptory notice to quit when the Queen chanced to come to Somerset House. On one occasion Elizabeth is said to have visited Arundel House during the absence of its owners, and finding some sentence scratched, as she supposed by the countess, on the glass of a window, which betokened hope of better fortune to come, she wrote beneath it a reply containing 'much passion and disdain'.[4] After the earl's attainder Arundel House with his other estates was declared forfeit. In November 1589 a Commission was appointed to hold an inquiry as to Arundel House. The consequent survey furnishes us with our chief knowledge of the buildings, and is the main subject of this paper. The jury found that the house, subject to the countess's life interest after her husband's death, belonged to the Crown. The countess was in occupation at Arundel House for two years from Michaelmas 1588, and was clearly present there at the time of the survey. But in December 1590 particulars for a lease

[1] *Index to Remembrancia*, p. 10.   [2] *Lives of Philip Howard and Anne his Wife*, 1857, p. 22.
[3] *Ibid.*, p. 113.
[4] Hervey, *Life of Thomas, Earl of Arundel*, pp. 192–3.

were delivered to the Lord Chamberlain, Henry Carey, Lord Hunsdon. The countess applied to be allowed the use of certain rooms on the north side of the court in the old part of the house, together with the garden and bowling alley. Hunsdon was ready to let her have what she desired except the garden and bowling alley; 'yet for her Ladyship's own recreation, her children and such like, she shall have a key to use the said garden and also to take her pleasure for recreation in any other gardens of the same house'.[1] Of the rooms thus assigned to Lady Arundel I shall have more to say later on, but it seems uncertain whether she resided at Arundel House for any considerable time after 1590. On 31st July 1591 she wrote to Robert Cecil that she was grieved she could not deliver her house sooner, she would have her stuff yet remaining at Arundel House removed that it might be delivered to whomsoever he might appoint.[2] Hunsdon died in 1596, but there does not seem to have been any fresh grant of Arundel House. The Countess Anne's own rights were revived by her husband's death, and for a time she was allowed to return. In September 1602 the earl of Nottingham wrote to Cecil that now that my lady of Arundel is sure to have Bath House,[3] he hoped he might have order from her to receive Arundel House.[4] He must have obtained possession very soon after, for on 2nd December following John Chamberlain writes that 'on Monday or Tuesday next the Lord Admiral is to feast the Queen at Arundel House'.[5] Nottingham had a double connexion with previous owners, as a cousin of the late earl of Arundel and son-in-law of Hunsdon. Presumably he had at first only a lease of the house; for on 10th August 1603 James I made him a grant of 'the mansion house called Arrundell House with other lands in St. Clement Danes'.[6] Nottingham was resident at Arundel House in January 1605,[7] but his tenure of it was not prolonged.

When in July 1603 Sully came to England as ambassador from Henry IV to James I he was lodged at Arundel House, which he describes in his Memoirs as 'one of the most beautiful and convenient lodgings with the most numerous rooms on one floor and all of one suite that I have ever seen'.[8]

The young son of Earl Philip, Thomas Howard, afterwards as earl of Arundel famous as the first great art collector in England, was now growing to manhood and beginning to find favour at Court. James I had granted him his father's titles of Arundel and Surrey, and on 18th April 1604 he had been restored

[1] Hervey, *Life of Thomas, Earl of Arundel*, pp. 511–12, and p. 267, below.
[2] *Hatfield MSS.*, vii, 327.   [3] The earl of Bath's Place in Holborn.
[4] *Hatfield MSS.*, xii, 377.   [5] Chamberlain, *Letters*, p. 166 (Camd. Soc.).
[6] *Cal. State Papers*, James I, 1603–10, p. 31.   [7] *Ibid.*, pp. 187, 189.
[8] *Mémoires*, iv, 313, éd. Petitot. Another French ambassador, the Baron de la Tour, was lodged at Arundel House in 1617. Nichols, *Progresses of James I*, iii, 294.

THOMAS EARL OF ARUNDEL IN THE SCULPTURE GALLERY

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ALETHEA COUNTESS OF ARUNDEL IN THE PICTURE GALLERY

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in blood.[1] With the help of his wife's fortune the earl was endeavouring to buy back his family estates, and on 23rd December 1607 he received a grant of Arundel House (which Nottingham had surrendered) though he had to pay 4,000*l.* for it. He had obtained possession even earlier than this, for he dates letters from Arundel House on 27th June and 17th November 1607.[2]

The forty years during which Earl Thomas owned Arundel House were the most splendid in its existence. He was a great noble as well as a great virtuoso, and lived in a manner befitting his rank. He was still comparatively young when he began his famous collections of marbles and pictures. In 1614 he paid his second visit to Italy, and Henry Peecham, who probably accompanied him, wrote in 1634 of the earl as one 'to whose liberal charges and magnificence, this angle of the world oweth the first of Greek and Roman statues, with whose admired presence he began to honour the Gardens and Galleries of Arundel House about twenty years ago'.[3] In 1616 Arundel received from Sir Dudley Carleton an ancient marble head of Jupiter, which he placed at Arundel House 'in his utmost garden, so opposite to the Gallery doors, as being open so soon as you enter into the first Garden, you have the head in your eye all the way'.[4] The portraits of the earl and countess, probably painted by Mytens in 1618, show them sitting, the earl in the Sculpture Gallery, which looks out on the Thames, and the countess in the Picture Gallery, where a vista of the Garden through the open door shows a fountain with apparently an archway leading into another garden; the head of Jupiter may have stood in that garden and been seen through the arch. The Sculpture Gallery must have been at the south-east corner, and the Picture Gallery at the north-west corner of the western block, the other garden was no doubt the Maze shown by Hollar and by Ogilby in his map in 1677.[5] At the beginning of 1627 a great collection of marbles from Asia, many of them with Greek inscriptions, was brought to Arundel House, whither Sir Robert Cotton and John Selden, accompanied by Richard James and Patrick Young, two eminent scholars, came eagerly next day at dawn to decipher them.[6] Later in the same year Joachim Sandrart describes how he visited that most beautiful Garden resplendent with the finest ancient statues in marble of Greek and Roman workmanship, and passed from the Garden into the Gallery where the superlative excellence of Holbein's pictures held the master's place.[7] Another visitor was Charles I, who in December 1628 came to Arundel House and went through all the rooms to see

[1] *Cal. State Papers*, 1603–10, p. 390.   [2] Hervey, *Life*, etc., pp. 36, 40.   [3] *Ibid.*, p. 82.
[4] *Ibid.*, p. 101.   [5] See pl. xlvi
[6] *Life*, etc., p. 280. Selden in 1628 published his ' Marmora Arundelliana . . . in aedibus eius hortisque cognominibus ad Thamesis ripam disposita'.
[7] *Life*, etc., pp. 255–6.

the collections.[1] George Conn, the papal agent who was in England in 1637, also describes how with the king and queen he went to Arundel Palace to look at the statues and pictures in the Gallery.[2] However, the history of the Arundel marbles and pictures does not concern us here, and I have merely endeavoured to bring together the more important references which have some bearing on the history of the House. One may suppose that some changes were necessary to provide an adequate setting for these splendid collections, and Arundel's letters in 1618–19 contain some mention of works in progress; in one he directs that the mats and all the stuff should be taken out of the rooms toward the water, so that they may go in hand to deal with the windows. The Garden (where many of the marbles were placed) also received attention and was in charge of an Italian called Benedetto.[3]

Arundel during the first years of Charles I was in opposition to the Court, but after Buckingham's death he was reconciled to the king, who in September 1630 was pleased to come privately one afternoon to Arundel House to stand godfather to the earl's grandson.[4] Henceforward Arundel was in Charles's favour and was employed on more than one foreign embassy. In May 1636, when about to return from Nuremberg, he wrote: 'I have one Hollarse with me, who drawes and eches printes in strong water quickly, and with a pretty spiritte.'[5] Hollar stayed with Arundel in England during nearly six years and did much work for him; the large window over the barn on the east side of the court belongs to a room which Hollar is said to have used as a studio.[6] It is to his views of Arundel House and its surroundings that we owe almost all our exact knowledge of its outward appearance.[7]

During the Scottish War in 1639-40 Arundel was in chief command, and at that time Councils met frequently at Arundel House.[8] When William, Prince of Orange, came to England in April 1641 to marry the Princess Royal, he was entertained at Arundel House for over a month. But of his stay we get no more particulars than that the officer of the royal wardrobe spent 14*l.* on washing 280 pairs of sheets that had been used by the prince and his suite.[9] Arundel took over the young princess to Holland in February 1642. He did not again return to England, but went on to Italy, where he died in 1646.

During and after the Civil War Arundel House was used by the Parlia-

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[1] *Life*, p. 264.   [2] *Ibid.*, p. 399.   [3] *Ibid.*, pp. 142, 144, 162, 165.
[4] *Ibid.*, p. 289.   [5] *Ibid.*, p. 366.   [6] A. M. Hind, *Hollar and his views of London*, p. 72.
[7] Besides the two views of the Court Hollar etched a view of London as seen from the roof of Arundel House (apparently taken from the leads over the Galleries) and a view of Milford Stairs taken from the foreshore below Arundel House and showing some of its outbuildings; the etched view of Milford Stairs is for our purpose of less interest than the drawing here reproduced. See Hind, *u. s.*, pp. 22, 71.
[8] See *Cal. State Papers*, 1639-40.   [9] Hervey, *Life*, etc., p. 432.

mentary government. In February 1644 the committee of both kingdoms met there, and on 31st October 1650 Ludlow signified to the then earl of Arundel that it was necessary to make use of Arundel House as a garrison, but that he should have consideration for it, and that care should be taken to keep it in as good order as may be.[1] The widow of Earl Thomas had rights in the house and owing to her absence abroad and her opinions possession was again taken by the government. On 15th September 1656 it was reported that there were 151 pictures and 103 statues of great value at Arundel House, sometime belonging to the countess but now to his Highness the Lord Protector; they were ordered to be inspected and after an Inventory had been made they were all to be moved into one room and locked up.[2]

After the Restoration the eldest grandson of Earl Thomas was restored as duke of Norfolk. But the duke being insane, Arundel House was in possession of his brother Lord Henry Howard, who, like his grandfather, was a friend of John Evelyn. After the Great Fire in 1666 Howard granted the Royal Society the use of rooms at Arundel House, and both Evelyn and Pepys record their presence at meetings there. Pepys had been there earlier in 1661, when he saw the fine flowers in the garden and the fine statues in the gallery, a brave sight, 'and thence to a blind dark cellar, where we had two bottles of ale, and so I took boat at Arundel stairs'.[3] When in 1668 there was talk of building a house for the Society, Howard offered a site in the garden of Arundel House. When the proposal was discussed on 2nd April Pepys was present and forced to subscribe 40l., though he thought the scheme likely to breed faction and ill will. But to his great content he did try the use of the Otacousticon with the help of which 'I did plainly hear the dashing of the oars of the boats in the Thames to Arundel gallery windows, which without it I could not in the least do'.[4] Evelyn favoured the scheme and on 24th December 1668 went to stake out ground for a college at Arundel House 'but did not finish it, which we shall repent of'.[5] It was Evelyn who in 1667 instigated Howard to give the noble library, which his grandfather and ancestors had collected, to the Royal Society: remarking that 'this gentleman had so little inclination to books that it was the preservation of them from embezzlement'.[6]

Evelyn also, observing how such 'precious monuments were miserably neglected and scattered up and down about the gardens and other parts of the

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[1] *Cal. State Papers*, 1650, p. 405.

[2] *Ibid.*, 1656–7, p. 110. Arundel had taken a great part of his collections abroad in 1642. Cf. Hervey, *Life*, p. 473.

[3] *Diary*, ii, 45.   [4] *Ibid.*, vi, 388.   [5] *Memoirs*, i, 413.

[6] *Ibid.*, i. 401, 418, 500. The manuscripts are now at the British Museum. The books were sold in the last century. Other manuscripts were presented to the College of Heralds, where they are still preserved.

house, and how exceedingly the common air of London impaired them', procured Howard to bestow them on the University of Oxford. Thereon he lost no time, but obtaining the key of the Gallery marked all those marbles that had inscriptions on them, assembled them together with those that were encrusted in the garden walls, and sent word to the Vice-Chancellor of the gift. The *Marmora Oxoniensia Arundelliana* was edited by Humphrey Prideaux, who was presented by Evelyn to Howard on 28 April 1676, when they both dined at Arundel House.[1]

Probably the house, much of which was very old, was threatened with decay as well as the marbles. In 1671 Howard obtained an Act of Parliament for building and improving the ground belonging to Arundel House, designing to build there a house for the residence of his family; the rents from the part to be built over were to be accumulated to meet the cost of the new house. On 14th July 1676, Howard, now earl of Norwich, with the intention 'as well for the more beautifying the said buildings by bringing them to a more just symmetry and proportion all along the river, as for enlarging the gardens of the House', petitioned the king for a grant of the soil for forty feet in depth from Strand Bridge to Milford Stairs. The petition was granted, subject to the ground being used only for a garden and on condition that no wharves, brewhouses, or other dwellings were erected thereon.[2] As a consequence the house was soon after pulled down,[3] and in Morden and Lea's map in 1682 a vacant space is shown on the river as 'the ground for Arundel House'. The frontage on the Strand had already been rebuilt, and Arundel and Surrey Streets with the north end of Norfolk Street laid out. Howard Street does not appear, but was apparently planned to run on the north front of the new house. The remaining statues and marbles are said to have been removed into the lower part of the garden and placed under a colonnade there; but the builders throwing down rubbish broke the colonnade and injured some of the statues.[4] The design for the new Arundel House was prepared by Wren. But ultimately the scheme was abandoned, and in 1689, the then duke of Norfolk being empowered by a fresh Act to grant leases of the garden ground, the lay-out of the site was completed as it exists to-day.[5]

[1] *Memoirs*, i, 409-10, 484. Some of the marbles may have been in the arcading shown in Hollar's view, between the two flights of steps leading from the orchard to the second garden.

[2] *Cal. State Papers*, Charles II, 1676-7, p. 226.

[3] The Arundelian Library was removed in 1678 (Evelyn, *Memoirs*, i, 500). Water Street, Arundel Street, Norfolk Street, and Surrey Street all appear with numerous residents in the Westminster Rate Books for 1680.

[4] A. C. Howard, *Anecdotes of the Howards*, pp. 93, 94.

[5] *Ibid.*, p. 110. Ogilby in his large scale map in 1677 gives the valuable plan here reproduced.
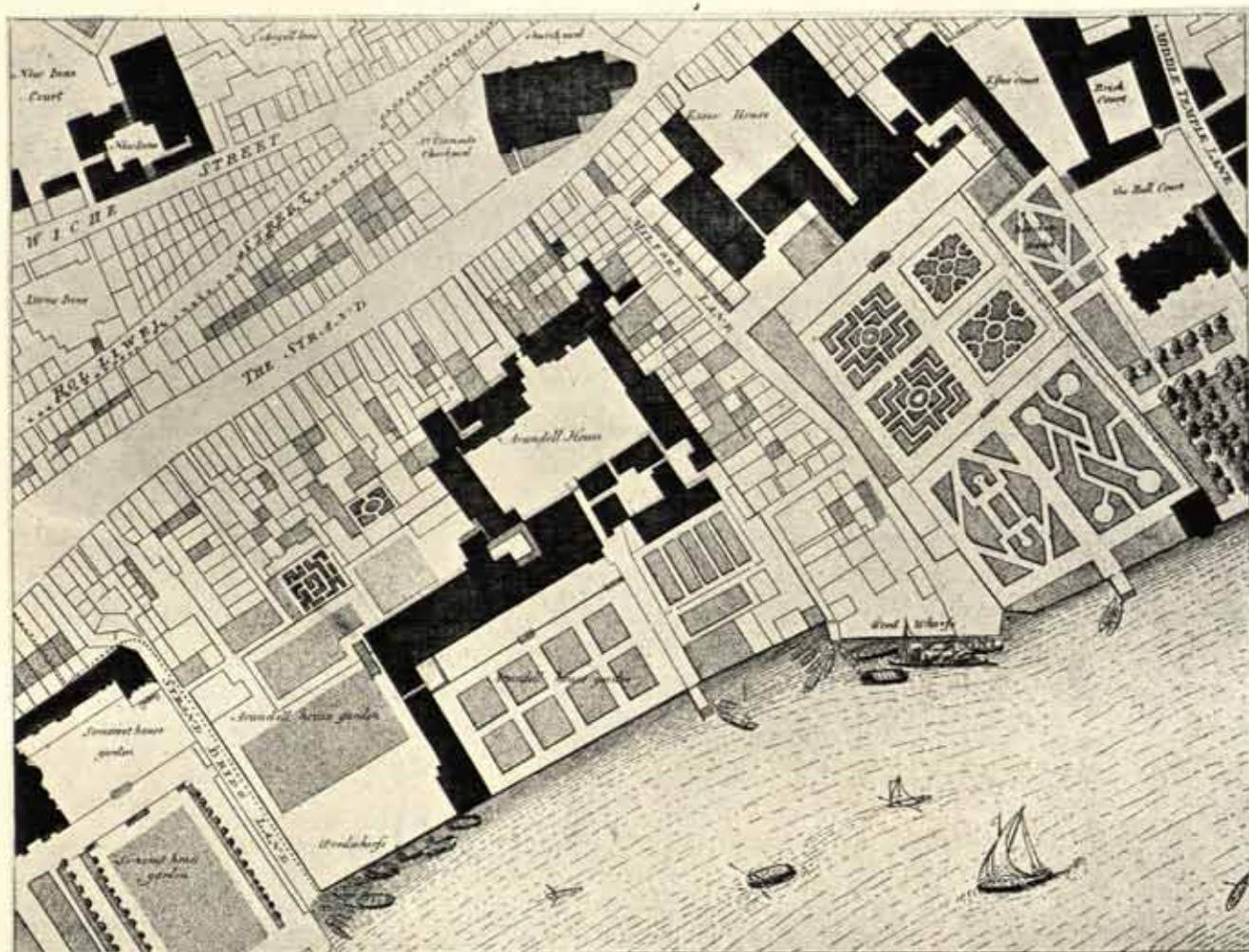
Arundel House and Essex House, from Ogilby and Morgan's map of 1677
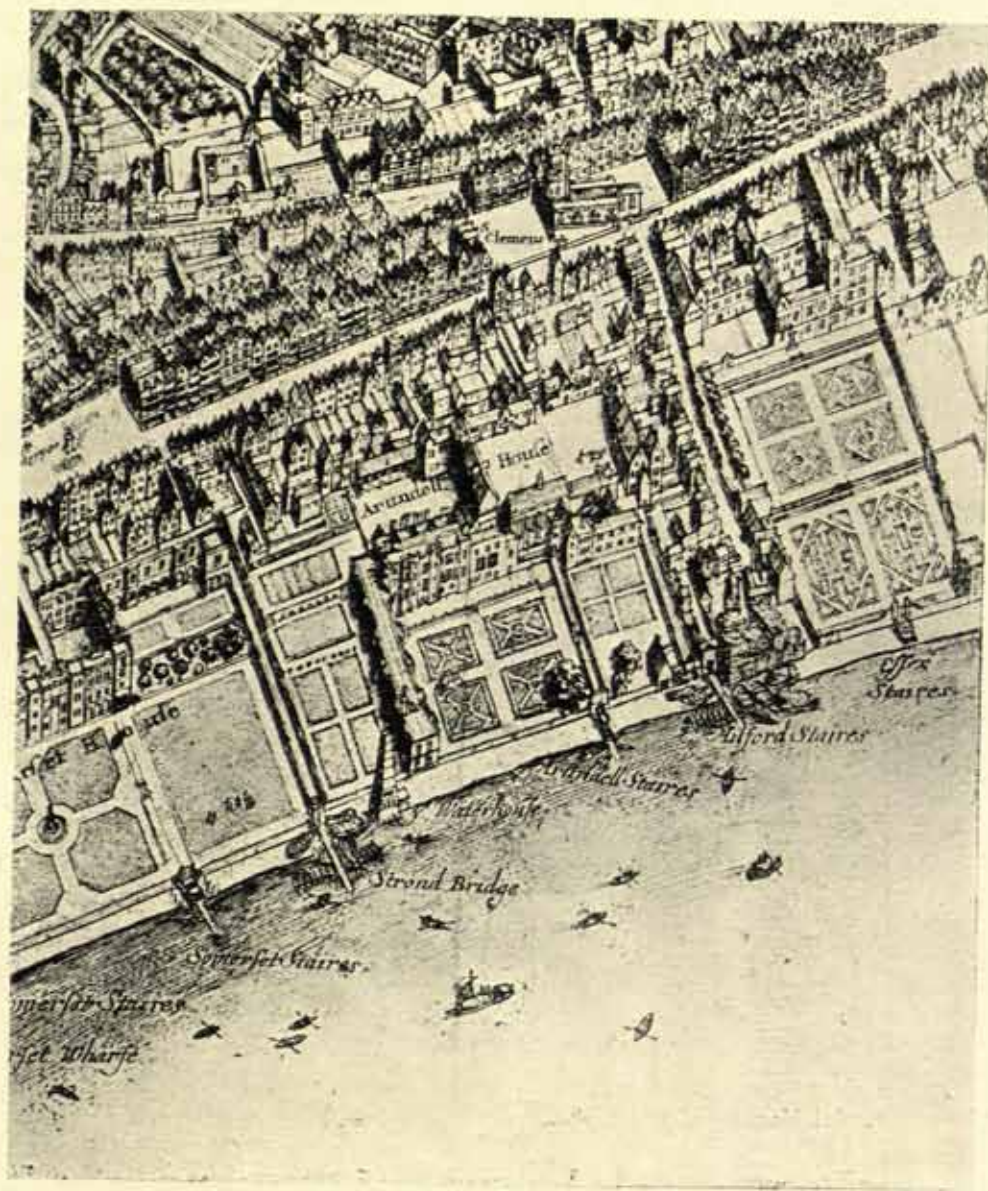
Arundel House and Essex House, from Hollar's View of West Central London

This record of a house with so great a history has seemed worthy to be brought together. But the account has also been necessary for the better understanding of the Survey of 1590, to which I will now return. The jury then found that Arundel House comprised a Court at the first entry, two gardens, an Orchard, a Bowling Alley, and divers fair buildings with barn, stables, etc. It was bounded on the east by various holdings and a part of the lane leading through the brewhouse to Milford Stairs; on the west by Strand Lane; on the north by tenements belonging to the house, and a lane leading to Strand Lane; on the south, of course, was the Thames. These are the bounds of Arundel House proper, and the house and gardens were stated to cover 3½ acres. The dimensions are then given: on the south 522 feet; on the north 612 feet [1]; on the east 335 feet; and on the west, from the corner of the wall towards the Thames to William Esgrige's wall 229 feet. The last is to the point where a lane turned out east of Strand Lane. The depth between the house proper and the tenements in the Strand was estimated to be 100 feet; the actual distance was rather more at the west end and rather less towards the east.

Having given these particulars, which are as necessary to us as to them, the commissioners went on to deal with the necessary repairs. On the right hand as you came into the Court was the Storehouse, 64 feet long and 21 feet broad; the north wall was in a ruinous condition and required to be buttressed. Between the Storehouse and the Barn was a lodging 70 feet in length, also in need of repair; this lodging must have formed the east end of the north side of the Court. Next to it on the east side came the new Barn and the Stables, 135 feet long and 20 feet wide. From the end of the old stable on the south to the porch of the Hall was 90 feet, which space was occupied by the Bake-house and Coalhouse. The Hall was in the south-west corner of the Court; the lantern required mending. On the west side of the Court was a Storehouse, 105 feet in length. The Court as shown by Ogilby in 1677 was of an irregular shape, about 150 feet in length from east to west, about 80 feet broad on the west side, and somewhat over 100 on the east side; the dimensions given for

The house may have been destroyed before the map was published. Huych Allaerdt (*Crace Collection*, Views ii,81) in his view about 1686 gives a rather fanciful representation of old Arundel House. Morden and Lea's view which formed the head-piece to the map of 1682 gives Arundel Buildings, the river front being the same as that shown by Bowles in 1720 (*ibid.*, ii, 83); this presumably represents Wren's intended building. A plan in the same collection (Maps xii, 58) gives Howard Street, and shows on its south side Norfolk House with an open court-yard. This plan (which is only a diagram) is dated 1720, but apparently represents an unexecuted project. The lay-out of the streets appears as complete in Strype's map.

[1] This must mean at the widest point, which was about the centre of the site. To obtain this length there must have been an extension to Milford Lane as stated in the Survey, though it is not shown in the plan of 1677 (see pl. xlvi,). It was probably a strip leading from the Kitchen Court to Milford Lane.

the buildings on these sides are obtained by their overlapping of the north and south blocks. Thus the Court was very much larger than any of the courts in the houses which I described last year.[1]

After dealing with the Court the Survey turns aside to give the Bowling Alley, which was 138 feet long and 18 feet wide. This we gather from the Survey projected westwards at the north-west corner; and in this position we can see it clearly in Hollar's general view.

The Kitchen Court is next dealt with. There was a house of divers offices at the east end of the Hall, two kitchens in the same Court, three small rooms belonging to the hot-house near the privy kitchen, and a block containing a pastery and divers lodgings. Hollar's views indicate clearly the existence of this Court, which is shown in the plan of 1677 as not quite 40 feet square, with another small Court farther east; the Pastery would seem to have been in the block between these two courts. From the south side of this block a pale extended 165 feet to the Thames, dividing the kitchen garden and the passage of the Slaughter-house from the pleasure-grounds. This pale can also be distinguished in Hollar's view, where it is not carried so far north as in the plan; the latter gives the pale as of the length stated. In Hollar's general view we can identify the Slaughter-house near Milford Stairs, and the clear space in front of it on the south of the kitchen garden is no doubt the passage. But this building is still better shown in a drawing by Hollar of Milford Stairs, now in the Pepysian Collection at Magdalene College, Cambridge, from which we find that it was a medieval structure and therefore no doubt one of the outbuildings of the Inn of the bishops of Bath.[2] It was 65 feet from the Slaughter-house to the Common Bridge; the wall between them and the Common Bridge itself were both in need of repair. The Common Bridge no doubt means Milford Stairs. The Brewhouse of which mention has been made will have been somewhere in the buildings shown by Hollar to the east of the kitchen garden, or it may be the arched building shown by Hollar as leading down to the stairs.

There was a vault in a cellar underneath a small paved court, which may be identified with the Court shown in the plan at the west end of the Hall; this is probably the blind dark cellar where Pepys drank his ale. Other particulars are given of the common passages of the sewers carried in vaults to the Thames and of repairs needed to the wall under the Privy Bridge (Arundel Stairs) on the Thames.

[1] *Archaeologia*, lxxi, p. 38.
[2] The building shown in Hollar's drawing can be readily identified with one in Visscher's view, where underneath it is the lettering 'Essex House'; but the lettering on that view from 'Savoy' to 'Essex House' is clearly out of place, being about ½ inch too far to the west. It still appears in Morden's view, the date of which is 1682.

Aula Domus Arundelianæ Londini, Septentrionem versus.
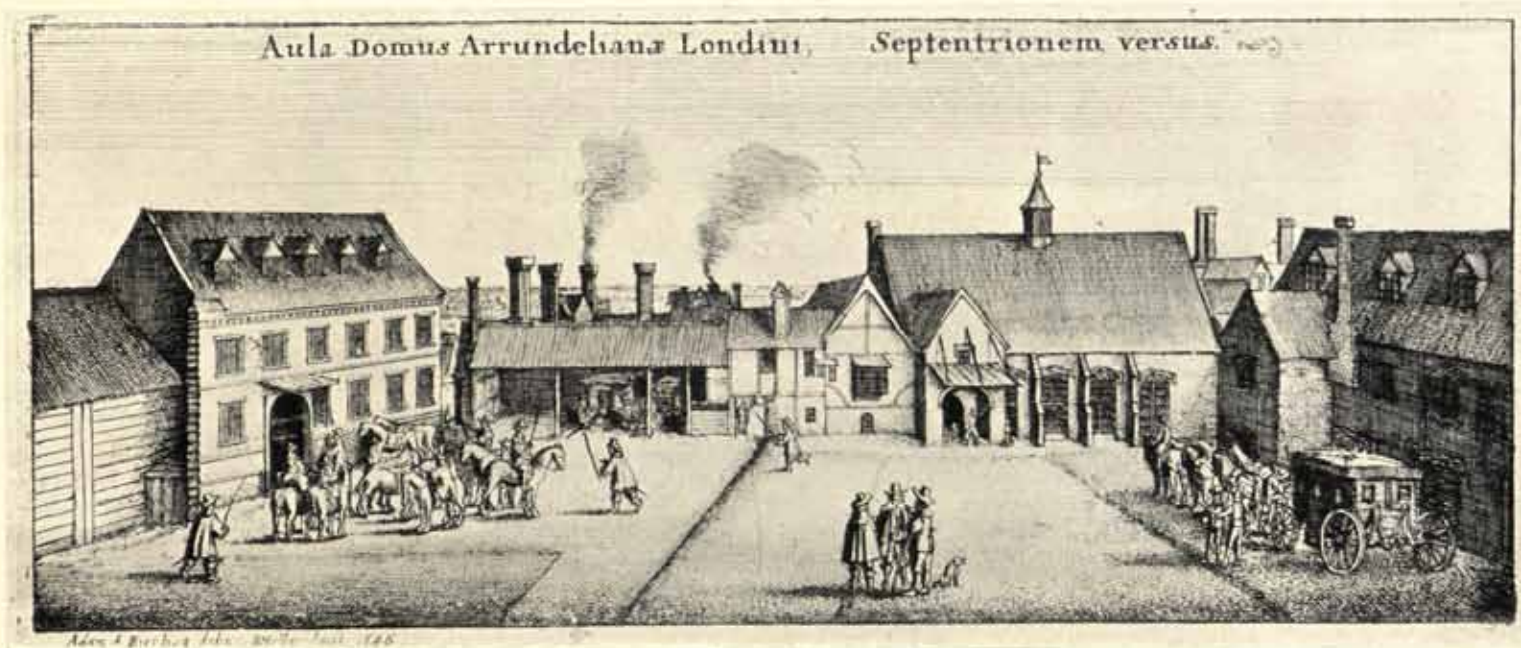
Fig. 1. Courtyard of Arundel House 'facing North', after a drawing by Hollar, 1646

Aula Domus Arundelianæ Londini Meridiem versus.
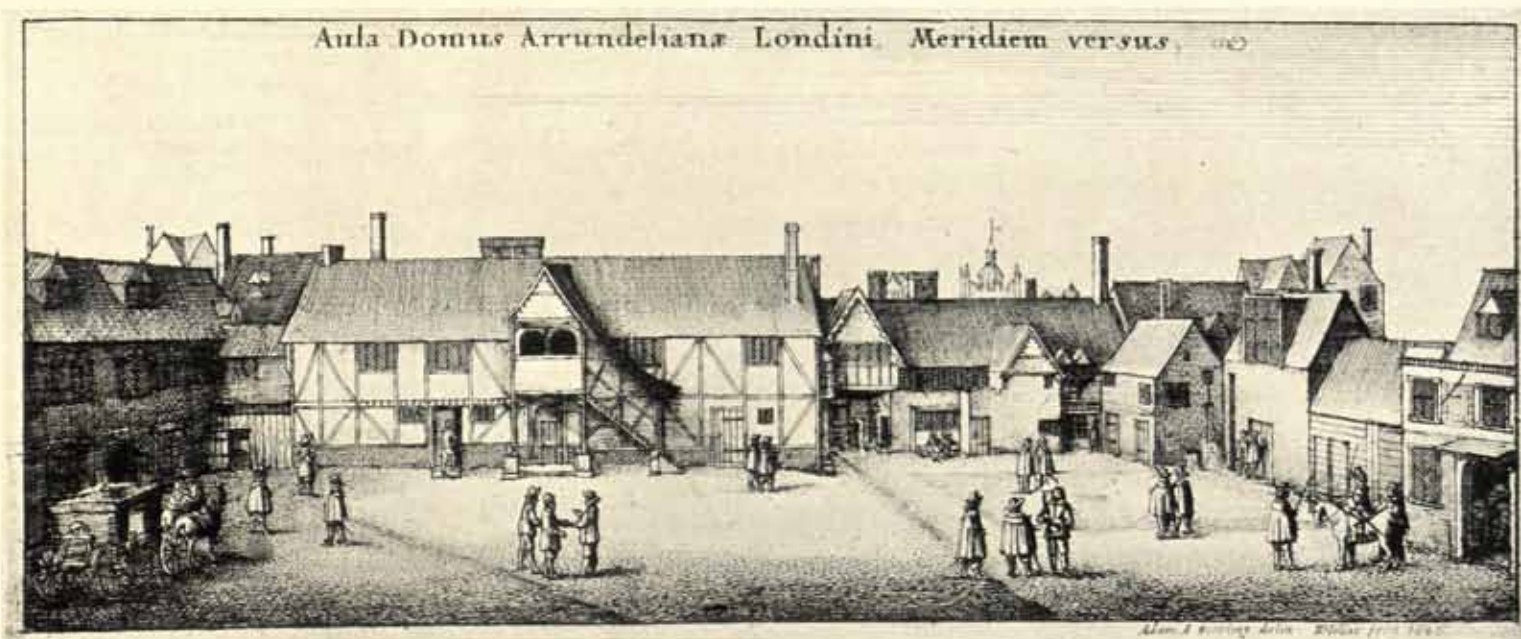
Fig. 2. Courtyard of Arundel House 'facing South', after a drawing by Hollar, 1646

Fig. 1.   London from the top of Arundel House, after a drawing by Hollar
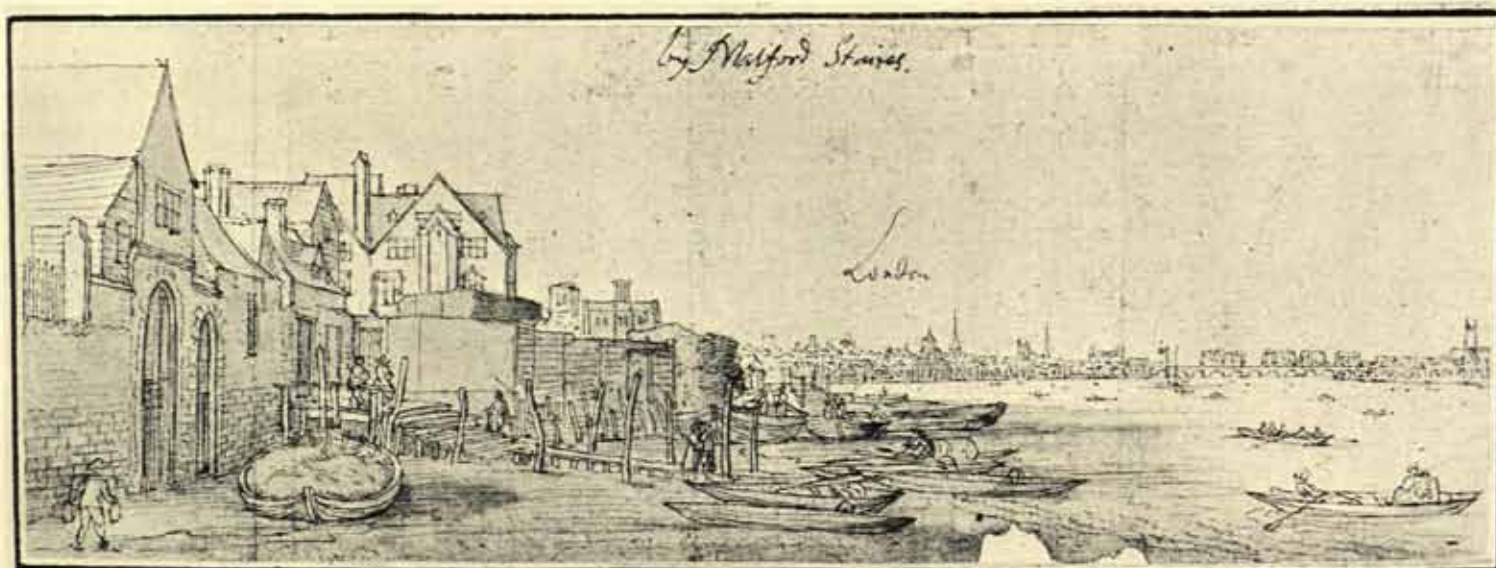
Fig. 2.   Milford Stairs, from a drawing by Hollar in the Pepysian Collection

All these buildings in 1590 needed repair, and a sum of 320*l.* had to be spent on them, to which was to be added 30*l.* for the repair of glass and mending of casements throughout the house. Most of them probably formed part of the ancient Bath Inn and were old. To the recent additions there is in the Survey only one brief reference: 'The great brickhouse and galleries, the decays thereof for plumbers, plasterers, tilers and carpenters will cost for tile and workmanship 30*l.*' No particulars are given as to the dimensions of the new building. The view and plan show it as an extensive L-shaped block; one wing reached westward from the Hall, and the other extended southwards from the west end of the main building to the river. The extreme length of the former was about 200 feet, and of the other 140 feet. In the plan the north wing is made to overlap the Hall. But Hollar's general view (which was probably drawn between 1656 and 1666) shows what appears to be the south side of the Hall, with perhaps a paved terrace in front. The plan may have included this terrace as part of the building. The Galleries, as shown in the portraits of Earl Thomas and his countess, must have been in the south-west wing. The two wings formed the north and west sides of the principal garden. Hollar shows this garden as laid out in four rectangular plats with a terrace in front of the main building and a walk along the river-side. The plan of 1677 gives a different arrangement of the actual garden.[1] The whole area of this garden must have been well over half an acre, and the other gardens to the west and north of the house must together have been about another acre.

Thus the House and its gardens were of a size which makes it easy to understand the admiration with which they are described. In the time of the earls of Arundel the Court must have been almost entirely given up to offices, the Hall forming as it were the entrance to the private mansion. There were some inferior apartments on the west and north sides of the Court, and it was here that in 1590 the Countess Anne, when dispossessed of her husband's stately home, sought a humble lodging for herself and her children. She desired to be granted a little room over the Hall porch and the chamber adjoining to the same eastward; two little chambers called the Nursery with the garret over them and the passage thence to the Lady's lodging; the lady of Arundel's lodgings[2] containing three ground rooms and three chambers over them, and three lobbies and the roof over them all, which lie on the west side of the great Court; a little passage from the east side of the north end of the Lady's lodging, leading eastward to the great old decayed Storehouse, with the ground between the lodgings and the west end of the Storehouse; the Storehouse extending east-

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[1] It is to be noticed that the view and plan agree more closely for the garden of Essex House.

[2] This is approximately in the same place as the Surveyor's Chamber mentioned on p. 249.

ward to the Porter's Lodge containing four ground rooms and three upper rooms, now in great decay, which is meant to be employed for a kitchen and other necessary offices; six rooms, three below and three above, on the east side of the gate extending to the Barn, with a very small cellar under one of the rooms. In addition she desired a garden with the Bowling Alley on the west side of her lodging, and free passage to the Water-gate, to the places mentioned and to the house of office. She was also to have a quill from the main pipe to supply water to her lodgings.[1] The garden of which Lady Arundel desired the use must be the plot between the bowling alley and the north wing of the great brickhouse. To the west of this garden was the orchard, and south of the orchard was another garden reaching to the river; to this garden you descended by two flights of steps, one at each end of the orchard. Between the flights Hollar's view shows arcading, which probably sheltered some of the marbles.

This completes the Survey of the House proper, but before turning to its precincts I must say something of the plan of 1677 which comes from Ogilby and Morgan's twenty-sheet map of London.[2] So far as concerns the buildings of the House it agrees generally with the Survey and the earlier views. But as regards the lay-out of the principal garden, as already noted, it varies, and as regards the other gardens and the tenements to the north the variation is still greater. The bowling alley has disappeared and its site appears to be covered by houses and gardens. A part of the garden to the south of the alley remains, but the lay-out of the orchard and western garden has been altered, and the lower part of the latter on the river-side is occupied by a wood wharf. Along the Strand the frontage which belonged to Arundel House is apparently divided into 28 tenements, 21 on the west of the gate and 7 on the east; at the time of the Survey there were only 16 on the west[3] and 4 on the east, and there were no houses between them and Arundel House. Hollar's view suggests that some part of the gardens of the tenements in the Strand had been built over, and to judge from the plan still more houses must have been built afterwards. As a consequence the plan is not helpful for the elucidation of the Survey in this part, except that it shows clearly a lane which led eastwards from Strand Lane for about 100 feet and then turned northwards and extended to the Strand.

[1] Hervey, *Life*, etc., pp. 511–12. The date '1585' there given is a modern entry in the original and incorrect; the fuller particulars in Lansdowne MS., 45, ff. 220, 221, show that the true date was 1590. See p. 267, below.

[2] It was probably etched in part by Hollar, who died early in that year. See Hind, *Hollar and his views of London*, p. 43.

[3] At the present time the houses from Surrey Street to Arundel Street are numbered 172 to 186 inclusive. Arundel Street is on the site of the gatehouse. One or more houses may have been absorbed in making the streets.

As regards the Strand frontage we learn that in 1425 the bishop of Bath had twenty tenements attached to his inn, and it is curious that in 1590 we find there were twenty tenements facing the Strand; but this is probably only a coincidence, for the areas concerned at the two dates do not seem to be conterminous, and it seems clear that the number of tenements had varied.[1] In the Survey of 1590 the names of all the tenants are given, and in some cases the signs by which the houses were known, together with the bounds of every house; the bounds show that we have a complete list, and that in 1590 there were no other houses between the street front and Arundel House. The names of the tenants need not detain us except for those of the two houses at the east end. Of the first the subtenant was Dr. Attisloe, who was a confirmed Romanist and was in the Tower under suspicion at the same time as Thomas, earl of Arundel.[2] The next house was in the occupation of Francis Cutting, gent., whom we may perhaps identify with Francis Cutting the lutanist, of whose history we, however, know little more than that he was resident in London about this time.[3]

As in 1509 so in 1590 the most easterly tenement was bounded on the east by a tenement which did not belong to the House, which we thus see did not at this point reach to Milford Lane. Altogether on the east side of the road which led from the mansion house called Arundel Place to the street there were four tenements, the fourth, then in the occupation of Widow Bright, appertaining to the keeper of the said capital messuage, and being the gatehouse.[4] On the west side of the gatehouse there were sixteen tenements, the last being bounded on the west by tenements belonging to Sir John Roper. The fourth house from the east was called 'the Maidenhead', the seventh 'the Blue Anchor', the tenth 'the Raven', the eleventh 'the Red Cross', the twelfth 'the Pye', the fifteenth 'the Axe', and the sixteenth 'the Spread Eagle'; these names are of some interest with regard to the later history of the site. The tenements did not in all cases extend from the street to Arundel House proper, being overlapped by the gardens of adjoining tenements. The ultimate southern bounds of the tenements were as follows. The first tenement at the east end abutted on the barn of the mansion-house; the corresponding tenement in 1509 was described as butting on the Cardinal's stable. The next butted on the court of the capital messuage late of Lord Lumley; perhaps the description is due simply to the legal estate which Lumley had in Arundel House before 1570. The third was overlapped by

[1] See p. 246, above.
[2] *Burghley Papers*, ii, 453; *Dict. Nat. Biog.*, ii, 233.
[3] *Ibid.*, xiii, 366. His compositions at Cambridge include a pavane for the countess of Arundel.
[4] In 1509–11 there were apparently six tenements here.

the garden of the gatehouse, which abutted on the mansion. West of the gatehouse John Horden had two messuages abutting on the mansion. Arundel Place is given as the southern bound of the next six. The ninth was overlapped by the tenth, the twelfth by the eleventh, and the thirteenth and fourteenth by the fifteenth. The tenth and eleventh tenements abutted on the bowling alley, and the fifteenth or 'the Axe' was bounded south and west by a lane adjoining the wall of the bowling alley and orchard of Arundel House. The sixteenth abutted on the lane which led to Strand Lane. The first eight of these houses seem to correspond to the first eight on the plan of 1677. The eight other houses in 1590 included some tenements of
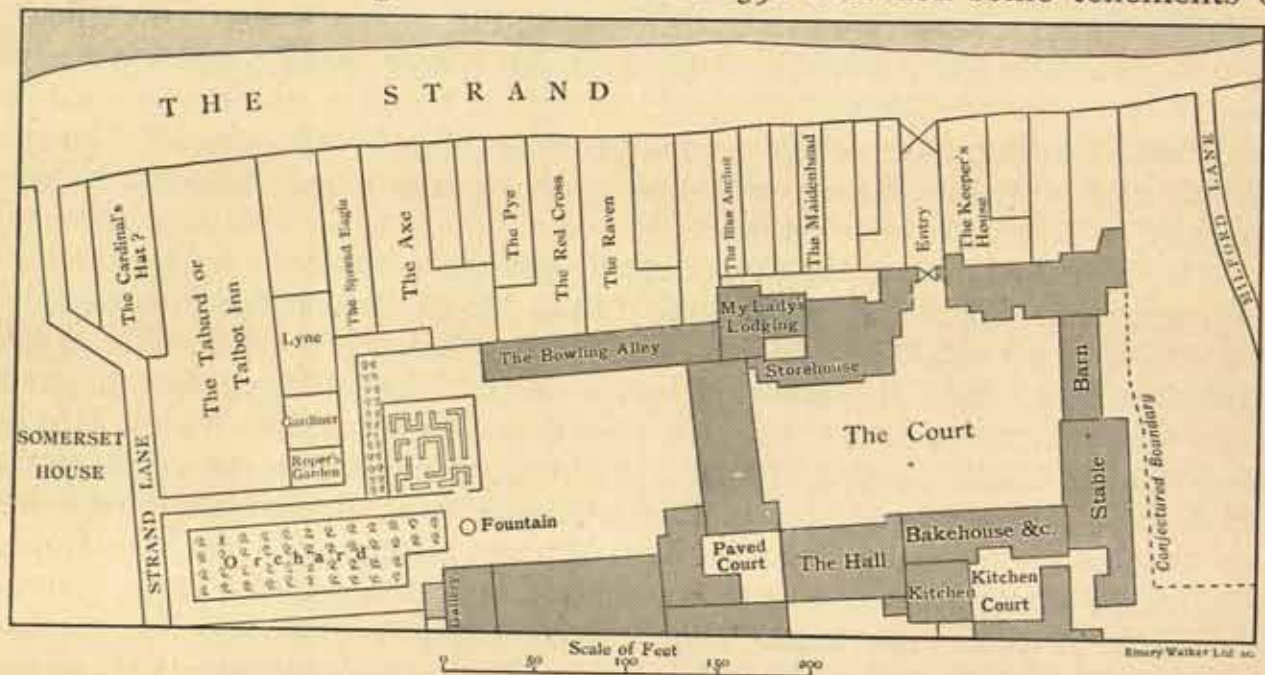
Fig. 2. Conjectural Plan of the North side of Arundel House.

There are no details as to the dimensions of the separate tenements on the Strand. This plan is therefore intended only to show their relative positions and shapes. The detail of the Maze and Orchard is supplied from Hollar's general view and Ogilbys plan; but, as suggested on p. 263, the planting may probably have been made after 1590 in order to mitigate the nuisance from the houses in the Lane. The Fountain and entrance to the Maze are supplied from the portrait of the countess.

a good size, but when divided into thirteen they must have been very small. From the description of the bounds of 'the Axe' the lane would seem to have again turned east along the north side of the gardens. Farther east there had anciently been a passage, between the north side of Arundel Place and the tenements, extending from John Horden's, which was the first to Widow Wall's, which was the eighth; it was a ladder place intended to facilitate the repair of the house and also to be a convenience to the tenants; it may originally have been continued behind the other tenements to join up with the lane leading to Strand Lane.

This lane was the feature which most vexed the commissioners and is the most difficult point for us. The Survey states that it was 229 feet from the corner of the wall towards the Thames to William Esgrige's wall; the latter wall was clearly at the north-west corner of the lane. This agrees so closely with the position of the present Surrey Steps, that the steps may be safely identified as marking the opening of the lane. The length of the lane, which at its east end was immediately south of the tenements fronting on the Strand, is given as 165 feet; this is greater than the possible direct distance, and at its east end the lane was farther north than Surrey Steps. It is clear therefore, though not stated in the Survey, that the lane turned north, and it is thus shown in the plan of 1677[1]; the length as shown agrees very nearly with that given in 1590. The commissioners of the Survey in 1590 found that the lane was 13 feet wide at both ends, but had been encroached on throughout almost its whole length. William Esgrige's wall in a length of 72 feet had encroached from one yard to over two yards, and he had made a laystall for his dung (his house being an inn) whilst the whole course of his water ran into the lane, being much and filthy, to the great annoyance thereof. Esgrige's Inn is in the position of the later Talbot Inn, for which I have suggested identification with the sixteenth-century Tabard; the Cardinal's Hat was still farther west, so that these two houses cannot have belonged to Arundel House in 1590. Next to Esgrige the wall of a garden belonging to Sir John Roper had encroached for 7 feet on the lane in a length of 8 yards; this garden was probably at the corner where the lane turned north. The house and garden of John Gardener, gunmaker, abutted on the lane for 19½ feet, and had encroached 6 feet; he had likewise built a smith's forge, the smoke whereof did much annoy Arundel Place and the private walks in the orchard, as also many of the tenants; it was a further annoyance that he had glass windows looking into the walks and galleries of the house. Richard Lyne butted on the lane for 31 feet and had encroached 5 feet, whilst his garden being raised at the east end lay upon the tenement of Sara Mintsey (The Spread Eagle) to its injury. Roper, Gardener, and Lyne all had sewers draining in the lane, which the commissioners found was very badly and uncleanly kept. We may fairly conjecture that the maze and adjoining shrubbery which appear in Hollar's view of 1646 had been planted to mitigate the nuisance caused by the houses in the lane.

There were some minor encroachments at the east end of the premises which need not concern us.[2]

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[1] The extension to the Strand may have formed part of some recent alteration.

[2] See pp. 274-5, below.

We may now say something on the relation between the present lay-out of the site and its ancient state.   The chief part of the site is made up of three streets running from the Strand to the Embankment, viz. Surrey Street, Norfolk Street, and Arundel Street, with a cross street, Howard Street, in the centre. Surrey Street is approximately at the western boundary following in part the line of the lane which has just been described. In Morden and Lea's map of 1682 Axe Yard appears between Surrey Street and Norfolk Street; it presumably represents the large tenement which was second from the west. Norfolk Street must cross the site of Arundel House proper towards the east end of the bowling alley and on the west of the buildings on the west side of the court; 'The Maidenhead' was a little west of Arundel Street. Arundel Street no doubt marks the position of the gate-house and entry. This left a considerable space to the east especially in the lower part, where Water Street was laid out as it still exists; Water Street opens eastwards from Arundel Street and then turns sharply south; it marks the north-east corner and east side of the court, and Messrs. W. H. Smith & Sons' stables stand there in part on the site of the stables of Bath Inn and Arundel House.[1] The line of Howard Street must be a little north of the galleries and hall. Strand Lane and Milford Lane still follow their ancient rather winding courses, though the former now ends in a cul-de-sac and with the raising of the Embankment has ceased to be a thorough-fare or more than a foot passage. Gay in his *Trivia* writes of Milford Lane:

> Behold that narrow street which steep descends,
> Whose buildings to the slimy shore extends.
> Here Arundel's famed structure reared its frame,
> The street alone retains an empty name.

The Survey ends with the measure of the pipes for the supply of Arundel House, the distances being given very exactly.[2] From the Gatehouse to the Churchyard wall by the south side of St. Clement's Church was 37 yards; thence northward to Mr. Harburne's corner, entering into the narrow passage into the Churchyard at the west end, 41½ yards; to the corner of The Lamb Inn 21½ yards; to the corner of Clement's Inn Court 29 yards; to the return in Clement's Inn Court 18½ yards; to the Conduit-head 15½ yards; and from the Conduit-head to the Aid 95 yards. The total distance to the Conduit was 163 yards and to the Aid 258 yards. So far as they can be tested these distances appear to be accurately given. The Conduit stood upon a piece of ground about 20 feet by 15; Clement's Inn had lately built a study with a jetty on one

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[1] The present stables extend from Water Street to Milford Lane, covering the site of St. Clement's Rectory in Milford Lane.   [2] See pp. 275-6.

Plan of the district, from Morden and Lea's map of 1683

387. Boswell Court ; 389. Lamb Inn ; 397. Talbot Inn ;
400. Axe Yard ; 407. Essex (Devereux) Court
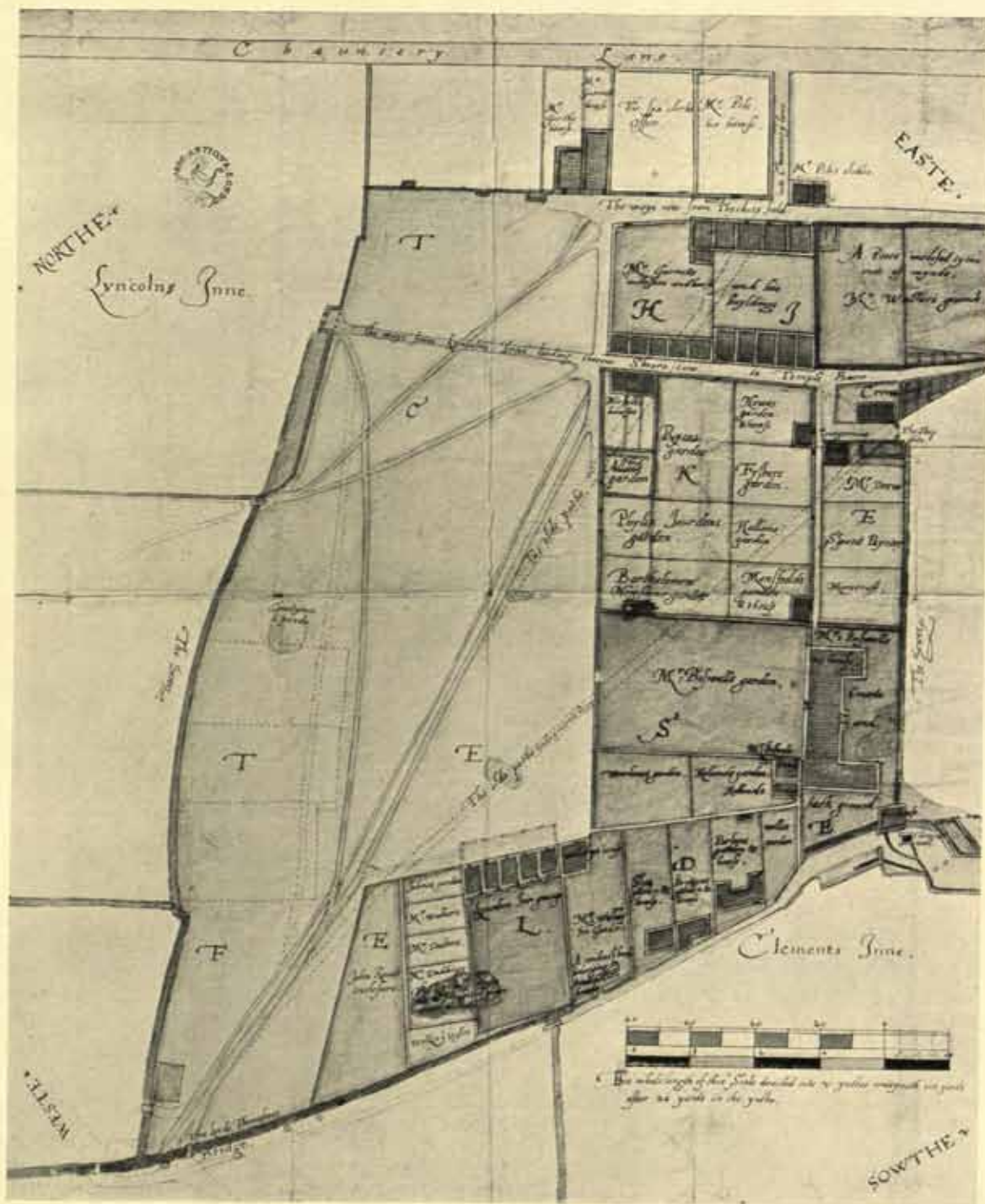
Map of Ficketts Fields, from a drawing in the possession of the
Society of Antiquaries, made about 1583

side and a carpenter had made a jetty on the other side and used the ground as a place to store timber. The tenants of the adjoining houses were in the habit of casting dead dogs and cats, and all manner of filth at the door of the Conduit-head, and through the fall of the ground there was drainage into the door 'whereby the water must be anoyed, the head decayed and the pipes rotted with the filth'. The state of the Aid was almost equally bad: here there used to be an open space about 10 feet square, but one Mr. Willoughby had enclosed it, also the line of the pipes had been built over by the assignees of Sir William Holles, so that it was impossible for the Aid and pipes to be inspected or repaired, and 'the inhabitants in these new buildings in their cellars may take quills out of the said pipes, which is not sufferable'.

A plan of Fickets Fields of nearly contemporary date in the possession of the Society shows 'A Conduit-hed belonging to Arundel House' in the required position and of the dimensions described.[1] In this plan the Conduit is placed in the garden of Mr. Willoby's house, a few yards from the Clement's Inn boundary. The plan does not show the carpenter's house which, according to the Survey of 1590, was on the north-east side of the Conduit. This makes it probable that the plan is of earlier date than 1590. If in the meantime that house had been built it would be in exact line with Slye's house, which is next on the east. Clement's Inn might at the same time have obtained possession of the narrow strip on the south-east side and built the projecting study. It is not unreasonable to suppose that these encroachments may have been made during the time when the earl of Arundel was a prisoner in the Tower between 1585 and 1589. That the plan is later than 1579 is proved by the fact that it shows at the north-west corner of Shere Lane 'Norfolks Houses'. John Norfolk acquired the ground on which these houses were built from Edward Clifton in that year.[2] On this evidence the probable date of the plan would appear to be

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[1] 'Middlesex Portfolio, p. 21.' It is marked on the back in a contemporary hand 'The Plot for all Thickett Fields' and in an eighteenth-century hand '1592 Ld. Burlington'. The latter has been taken to be an indication of the date, but appears to refer only to the number of the drawing in a collection, probably that of the famous third earl of Burlington. There is a modern copy in the Crace collection at the British Museum (Part xv, 11).

[2] Deed in the writer's possession. It is dated 18th August 1630, but recites a deed of 1st June 1579 whereby Edward Clifton, citizen and skinner, demised to John Norfock and Anne his wife 'One peece or parcell of ground lyinge and being in ficketts feild . . . next adioyninge to the way leading out of the said ficketts feild to the Temple barre into ffleetestrete, conteyning in length from the uttermost poste then standinge in the Brickwall of the gardens then in the tenure or occupation of the said Edward Clifton or his assignes close to the said way vnto one other poste then standinge and being in the foresaid Brickwall northward at the end of the seaventh Pannell, being twenty three yards and one foote of assize or thereabouts . . . and in bredth fiftie and five foote of assize or thereabouts and lyeth betweene the foresaid Brickwall of the said gardens then in the tenure of the said Edward Clifton on the South, one parcell of the said ficketts feild towards Lyncolns Inne on the North,

about 1583. It is curious that the plan shows the Conduit-head in the garden of Mr. Willoby's house and that the Survey describes the Aid as enclosed by 'one Mr. Willoughby'. Possibly Willoby being in a position to obtain access to the Conduit had made the enclosure at the Aid in order to protect the Conduit and draw thence for his own purposes. The Aid was 95 yards from the Conduit, and a line of that length nearly due west from the Conduit brings us to a point close to Holles and Houghton streets, at a short distance from the present Clare Market: this agrees with the statement in the Survey that the line of the pipe had been built over by Sir William Holles's assigns. The fact that Holles's tenants drew water by quills from the pipes makes it probable that the Aid was not the actual source of the supply, since the pressure would have been inadequate; it is possible that the Aid was connected with the pipe by which water was conveyed from Tyburn to Fleet Street.[1]

In the Agas map this district appears still as open fields with cows grazing in them. In 1590 it was in process of being covered with buildings, and it was reported that the Conduit and Aid, which were in great decay, would cost 13*l.* 6*s.* 8*d.* to repair. As a source of water-supply they must have been past praying for. In Hollar's view 'the Waterhouse' appears in front of the grounds of Arundel House close to Strand Bridge. This Waterhouse was set up by Sir Edward Ford in 1656 to supply the neighbourhood; it did not belong to Arundel House and was removed in 1665.[2]

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the foresaid way on the East, and a new Brickwall then lately enclosed by Raph Boswell, esquier, on the west, which said parcell of ground is parte and parcell of two acres and one Rode of pasture lying and being in the said ffickets feild, whereof the said Edward Clifton stood seized in his demesne as of fee as aforesaid. And alsoe . . . did demise . . . free ingresse, egresse, regresse, way and passage for them . . . and for the horses cartes and carriages of them . . . by and through the Gate, Lane and way att the East end of the said fficketts feild leadinge and cominge from the Lane called Chancery Lane towardes and into and thorough the said ffeild from the said way vnto the said Peece of ground'.

[1] The adjoining Essex House was thus served with a part of its water-supply before 1600; cf. *Index to Remembrancia*, p. 554.

[2] See *London Topographical Record*, ii. 110–11; the Waterhouse enables us to date Hollar's view of West Central London; it does not appear in his Long View published in 1647.

APPENDIX

I. THE SURVEY OF ARUNDEL HOUSE

1590

The Commission appointed on the attainder of Philip, earl of Arundel, had to deal both with Arundel House and the Charterhouse. Their Report is now contained in *Exchequer* (K. R.) Miscellaneous Book 45, a thin quarto of twenty-four leaves of parchment, the Survey of Arundel House being contained on ff. 1–14; prefixed are the Letters Patent and the Articles of Instructions. The important part of the Charterhouse Survey is printed in the Rev. G. S. Davies's *Charterhouse in London*, pp. 340–41.

The Survey of Arundel House is here given in full, except that abstracts only are given of the Deeds recited on ff. 4–12. The Survey formed the basis of other reports by John Hill, one of the Commissioners, to Lord Burghley. These are now contained in the Lansdowne MSS. at the British Museum: viz.

Lansdowne MS. 45, nos. 82 and 83. A summary of the Survey with a report as to the rental due from 1588 to 1592; the House was used by Lady Arundel from Michaelmas 1588 till after Michaelmas 1590, and from December 1590 particulars were delivered to the use of the Lord Chamberlain for a lease. A part of the document, relating to the rooms desired by the countess for her occupation is printed in Miss Hervey's *Life of Thomas, Earl of Arundel*, pp. 511–12.

Lansdowne MS. 45, no. 85. Also a summary of the Survey, with fuller particulars as to the rooms desired by the countess, beginning: 'A little room over the Hall porch, wherein the Queen's Minister's evidence touching Arundel Rape in Sussex be placed And the chamber adioyning to the same estward with fitt passage thereunto. Two little chambers called the Nurcery with that garret over them both and the passage from them to the Ladies lodging.' The description of the remaining rooms is the same as that given by Miss Hervey (see pp. 259-60, above).

Lansdowne MS. 68, no. 75. A return as to the rental fixed at 30*l*. 'including both that part of the house required by the Lord Chamberlain and that now desired by the Lady Arundel. The Lord Chamberlain to answer to the Queen for the whole rent and the Lady to contribute to him ratably for that she holdeth'.

'By Letters Patent, dated 14th November 1589' Thomas Fanshawe, Peter Osborne, John Hill— auditors of the Exchequer,—Robert Buxton and George Sotherton were directed to hold an inquiry and make a survey 'of the houses, buildings, lands, tenementes and hereditamentes in the Citty of London and Countie of Middlesex come to her Majesty by the attainders of Thomas, late Duke of Norfolk, and Phillipp, late Earl of Arundell'. They were to view all letters and grants: to inquire how the premises came to the Duke and Earl: to ascertain all rents and profits: what leases were in existence: what waste, decays, and encroachments had been done: and to make a return on parchment.

THE SURVEY of Arundel House was taken on 4th April 1590 on the oath of eighteen f. 1. Jurors, the majority of whom were tenants of the houses in its precincts. The Jury found on oath that there was:—

'Unum messuagium sive domus mancionalis vocatus Arundell house, cum vno atrio in primo introitu, duobus gardinis, uno pomario, diuersis ambulatoribus, vno le bowling alley, necnon diuersis pulchris edificiis cum horreo, stabulis. cum omnibus et singulis suis pertinenciis . . . iacens in parochia Sancti Clementis Dacorum . . . in longitudine inter terras diuersorum hominum et partem venelle ducentem vsque Milford Staires per domum brasinium ex parte orientale, et venellam vocatam Strond lane ex parte occidentali, ac in latitudine inter diuersa tenementa dicto Capitali messuagio nuper pertinencia in separalibus tenuris diuersorum Tenen-

f. 1*b*.

tium ibidem, videlicet Doctoris Attisloe, ffrancisci Cutting, Thome Covent, Vidue Bright, ac viam ducentem a domo predicto usque Regiam viam ibidem, ac tenementa in tenura Johannis Horden, Willelmi Wood, Thome Slie, Roberti Wilson, Thome Saunders, Henrici Starkey, Vidue Wall, Garet Dewse, Anthonii Millington, Ricardi Bedoe, Thome Ellice, Johannis White, Leonardi fforman, Roberti Seale, et Sare Mintsey, et venellam ducentem a domo predicto usque Strond lane ex parte boriale, et flumen Thamesis ex parte australe, continens per estimacionem iij acras di. terre. Per Annum xxx*li*.

The Measure of the whole house and circuit of Arundell place.

'In primis, it conteyneth, being mesured on the Southsyde towardes the Ryver of Temes to witt from Millford lane to the lane called Strond lane in length fyve hundreth xxij foote.

'In length likewyse one the north syde it conteyneth per estimacionem vjCxij foote.

"The same house and ground conteyneth in bredth on the Est syde per estimacionem CCCxxxv foote.

'The same likewyse conteyneth in breadth on the West syde in the Strond lane from the Corner of the wall towards the Temmes to William Esgriges wall and leystall CCxxix foote.

'The breadth from the bowling Alley to the tenementes belonging to Arundell place per estimacionem C foote." [1]

A Survey taken the iiij[th]. of ffebruary 1589 of the needfull Reparacions in Arundell house by her Ma[ties] Officers of the Woorkes with certen of the Jury impanelled to enquire of the same.

f. 2.

The Great Court.

'In primis, the Storehouse upon the right hand coming in towards the Hall conteyneth in length lxiiij foote, and in breadth xxj foote: the whole length wherof must have buttresses of bryck made to keepe the wall vpright which is sagged with the ground on the north syde, so that it is in rewin and redy to fall: which to be taken downe and made vp agayne will cost by estimacion for all maner of stuff and workmanship the some of lxvj*li*. xiij*s*. iiij*d*.

'The next lodgying from the said olde Storehouses to the barne conteyneth in length lxx foote or therabouts, wanteth also certen reparacions as well for ground pining as tyling the said houses: which in estimacion will amount to the some of xv*li*.

'The new Barne with the Stables adioyning conteyneth in length Cxxxv foote, and in wydenes xx foote; the Stables wanteth plancking and joysting, tyling and gronsoling, and the walls being decayed; will cost for stuff and workmanship xxx*li*.

'The old Backhouses and Colehouse raynging from the end of th' old stable to the porch of the hall conteyneth in length iiij[xx] and x foote and in breadth xviij foote: in which length there is an old house, which conteyneth lviij foote in length, adioyning to the barne end, being redy to fall and is verie needfull to be repayred: which will cost by estimacion, with the other end which is somewhat better in reparacions, the sum of xlv*li*.

'One long Storehouse on the West syde of the said Court conteyneth in length Cv foote, and in breadth xxx foote: thone parte whereof on the west syde must be all new ripped through out, and thother syde on the East part is in reasonable good reparacions, which will cost by estimacion. xiiij*li*.

f. 2*b*.

'The bowling alley, which conteyneth in length Cxxxviij foote and in breadth xviij foote requireth to be new rypped quight through; which will cost for stuff and workmanship, xv*li*.

'The mendyng of the lantorne and repayring of a gutter in the topp of the hall, and the porches, with stone, tyling and plumbers work, will cost. C. s.

'In the Kechyn Court and other places.

'One house of diuers offices adioyning to the East end of the Hall conteyneth in length

[1] Meaning no doubt to the Strand frontage.

xlv foote and in breadth xxvij foote, which to be new rypped and tyled will cost for stuff and workemanship xiij*li*. vj*s*. viij*d*.

'Two Kechyns in the same Court to be repayred where neede requireth will cost by estimacion iiij*li*.

'Three roomes x foote square a pece, belonging to the hott-house nere the pryvy kechin, needfull to be new joysted and boorded: which will cost for stuff and workemanship. lv*s*.

'A pastery and diuers lodgings conteyneth in length liiij foote and in breadth xx foote: the foundacion and walles to be repayred with tyling and other necessaryes there needfull to be don will cost xx*li*.

'One pale from the said Lodginges to the Themmes conteyneth Clxv foote in length, which pale devideth the kechine garden, and the passage to the Slaughter house and pryvye; which will cost to be repayred. ix*li*.

'The Slaughter house and pryvie house conteyneth in length xxxvj foote, and in bredth xv foote: which will cost for tyling and walling by estimacion, C*s*.   f. 3.

'The Wall from the Comon Bridg to the Slaughter house, which conteyneth in length lxv foote, to be brought up with brick iiij foote high with a crest, will cost vij*li*.

'The Comon Bridg upon the veiwe to be repayred substancially, being in great decay, will cost by estimacion, xxx*li*.

'The great bryck house and galleryes: the decayes thereof, for plummers, playsterers, tyler and carpenter, will cost for tyle and stuff and workemanship, xxx*li*.

'One Vault in the Cellor conteyneth in length xxx foote and in breadth vj foote: there is a square Court paved over the same vault: the decayes of which pavement doth lett the water sewe through the vault, which Court conteyneth in length xxv foote and in breadth xx foot and will take in stone, besydes that which remayneth there allredy, CCCl foote of new stone: and requyreth of necessyty to be amended with new stone; new laying the same and repayring the ould will cost by estimacion, xiij*li*.

'The Comon passages of the Sewers from the whole house caryed in vawltes to the Themmes: to be repayred will cost by estimacion, xx*li*.

'Vnder the pryuy bridg the foundacion of the wall adioyning vpon the Theammes being waterworke will require xl foote of stone, verie needful to be don presently: which will cost by estimacion for stuff and workmanship, vj*li*.

'The Repayring of all the Glasse in the house and offices, with mending of the Cazementes and barrs: will cost by estimacion. xx*li*.

'The Repayring of the forsaid decayes will amount to the Some of CCClxx*li*. xv*s*.   f. 3*b*.

'The Jury, vpon like viewe of the Conduit head and ayd therevnto, do fynde them in great decaye; which to repayre in all reparacions, will cost for stuff and workmanship, by estimacion, xiij*li*. vj*s*. viij*d*.

Incrochementes.

'Also vpon the veiw taken by the Queenes said Officers and others of the said Jury of a lane on the north syde of the Orteyarde of Arundell House, the length of the same lane being Clxxv foote and the breadth at the twoo endes thereof conteyneth xiij foote, they do fynd that William Esgriges wall abutting vpon the said lane in length lxxij foote hath encroched vpon the said length into the said lane, in one part ij yardes and a quarter, and in another parte one yard iij quarters, and also in the third parte one yard, and hath a verie noysom sewer into the same lane and a Leistall therto adioyning.

'Sir John Roper, Knight, doth butt upon the same lane with his bryck wall xxiiij foote in length, in which length he hath incroched vij foote and hath a dore into the same lane.

'John Gardener, Gunmaker, butteth vpon the said lane xix fote di. in length, in which length he hath encroched vj foote and hath a lyke dore and passage with a noysome sewer into

the said lane.   And hath glasse windowes looking into the pryvat Walkes and gallery windowes of Arrundell House with a Smithes fordge, which is a great annoyaunce to the said house and tenementes.

'Richard Lyne doth also butt vpon the said lane xxxj foote di.; and hath encroched on the said length v foote or theraboutes, with a lyke doore into the said lane and a sewer also.

'Moreover they do fynde the same lane to be verie badly and vnclenly kept.   And for the Encrochementes aforesaid, they say the said ought not to be suffered except the Encrochers can shewe specyaltyes to the contrary.'

f. 4.   Tenementes belonging to Arundell house.

Abstracts of the deeds are given in Latin, with comments in English.   Here it is enough to give a summary list.

John Bell, 'taylor,' holds by demise of John, Lord Lumley, dated 25th May 1565, to John Frankeline, tallow chandler, for 30 years from Lady Day 1571, a messuage between the tenement in the occupation of Thomas Harris E., and the tenement of Francis Cutting W., abutting on the highway N., and the barn of the earl's mansion-house S.   Rent 46s. 8d.

'This tenement is old building and in reasonable reparacions.'

Francis Cutting, gentleman, holds by demise of Lord Lumley to John Elstrack *alias* Helper, 'glasier,' dated 24th February 1566–7 for 21 years from Lady Day 1571, a messuage between the tenement in the tenure of Dr. Attisloe[1] E., and the tenement of Thomas Covent W., abutting

f. 4b   on the highway N., and the Court of the capital messuage late of Lord Lumley S.   Rent 40s.

'This tenement is old building and in reasonable reparacions.'

Philip, late earl of Arundel, had granted on 18th February 1582–3 a lease in reversion to Cutting.

Thomas Covent, 'sadler,' holds by demise of Lord Lumley to Robert Read,[2] sadler, dated 25th May 1565, a messuage between the tenements of F. Cutting E., and of Widow Bright W., abutting on the highway N., and a garden in tenure of Widow Bright S.   Rent 46s. 8d.

'This tenement is old building and in resonable reparacions.'

Anne Bright, widow, holds a messuage between the tenements of T. Covent and F. Cutting E., and 'viam ducentem a domo mansionali vocato Arundell place vsque commune stratum'. W., abutting on the said mansion-house S., and the tenement of T. Covent and the highway

5.   N.   Rent *nil,* 'quia pertinet Custodi Capitalis messuagii predicti, tamen valet per annum xs.'.

'The tenement aforesaid vsed to the Gatehouse of Arundell [place] is of old building and in meane reparacions.'

John Horden holds by demise from Lord Lumley dated 30th May 1565 for 31 years from Lady Day 1586, a messuage 'inter portam domus mansionalis.' E., and another tenement of the late earl in Horden's tenure W., abutting on the highway N., and the capital messuage called Arundel House, S.   Rent 30s.

'This tenement is very old and in decay.'

John Horden, *alias* Harding, 'iremonger,' holds by indenture from Lord Lumley to Thomas Williams, 'taylor,' dated 25th May 1565, for 21 years from Lady Day 1571, a tenement between Horden's other tenement E., and tenement of W. Wood W., abutting on the highway N., and Horden's other tenement S.   Rent 10s.

'This tenement is old building and out of reparacions.'

f. 5b.   Philip, late earl of Arundel, had granted a lease in reversion to Richard Bedoe on 20th March 1585–6 for 21 years.

William Wood, pewterer, holds by Indenture from Lord Lumley dated 29th May 1565, for

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[1] Clearly as tenant of John Bell.
[2] Robert Rede in the Churchwardens' Accounts for 1567–8.

31 years from Lady Day 1571, a messuage between the tenements of John Harding E., and of T. Sly, W., abutting on highway N., and Arundel Place S.   Rent 10s.

'This tenement is old buyldinge and in reasonable reparacions.'

Thomas Sly, 'Serjant de le Woodyard,' holds by Indenture from the late earl, dated 20th June 1586, for 31 years, a messuage called 'the maiden head' late in the tenure of Henry James, goldsmith, adjoining the tenement of W. Wood E., and the tenement of R. Wilson W., abutting on the highway N. and Arundel Place S.   Rent 40s.

'This tenement is new builded on the backe syde by Thomas Slye and is in vearie good f. 6. — reparacions on the fore syde.'

Robert Wilson, 'sadler,' holds by Indenture from Lord Lumley to Charles Broughton dated 10th June 1565, for 31 years from Lady Day 1572, a messuage between the tenements of T. Slye E., and of T. Saunders W., abutting on the highway N., and Arundel Place S. Rent 33s. 4d.

'This is likewise in good reparacions and reasonable building.'

Thomas Saunders, 'chaundler,' holds by Indenture from Lord Lumley to John Towerson[1] dated 25th May 1575, a tenement sometime in the tenure of George Obaston, parchment maker, and afterwards of J. Towerson, next the tenement of R. Wilson E., and tenement of H. Starkey W., abutting on the highway N., and Arundel Place S.   Rent 26s. 8d.   f. 6b.

'This in reasonable good reparacion and buyldinges.'

Philip, late earl of Arundel, granted a lease in reversion to Richard Bedoe on 20th March 1585-6 for 21 years.

Henry Starkie, blacksmith, holds by Indenture from Lord Lumley to Charles Broughton, gent., dated 10th June 1565, for 31 years from Lady Day 1582, a messuage called 'le blew Anker', late in tenure of C. Broughton, between the tenements of P. Saunders E. and E. Wall W., abutting on the highway N., and Arundel Place and its land S.   Rent 26s. 8d.

'This tenement is well builded towardes the foresyde by Henry Starky, but old building on the back syd yet in good reparacions.'

Elizabeth Wall, widow, holds by Indenture from Lord Lumley to William Wall[2], carpenter, dated 10th October 1565, for 31 years from 1578, a messuage between the tenements of H. Starkey f. 7. E., and R. Fidling W., abutting on the highway N., and Arundel Place S.   Rent, 40s.

'This tenement was new builded on the back syde not many years synce by William Wall, husband to the widdowe now tenaunt, but the fore partes are old buylding, yet in reasonable reparacions.'

Richard Fidling, bitmaker, holds by Indenture from Lord Lumley to William Laudian,[3] armourer, dated 12th July 1567, for 31 years from Lady Day 1571, a messuage between the tenements of E. Wall E., and A. Millington W., abutting on the highway N., and the land of A. Millington's tenement S.   Rent 40s.

'This tenement is old buyldinge backward, and new forward, in reasonable reparacions.'

Anthony Millington, gent., holds by Indenture of Lord Lumley to Robert Flecher of f. 7b. Sutton, Cheshire, esquire, dated 25th May 1565, for 44 years from Lady Day 1572, a messuage with garden, called 'le Raven', late in the tenure of Edward Robinson, between the tenements of R. Fidling E., and R. Bedoe W., abutting on the highway N., and 'le bouling Alley of Arrundell place' S.   Rent 40s.

'This is well built, parte by Anthony Myllington and parte by his predecessor and is in good reparacions.'

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[1] Towerson had succeeded Oboston or Osboston before 1545.   See p. 249, above.   His name appears in the Churchwardens' Accounts for 1575-6.

[2] William Walle occupied it in 1575-6.

[3] William Laudyon appears in the Churchwardens' Accounts for 1571-2.

Philip, late earl of Arundel, had granted a lease in reversion to John Keeper on 20th April 1583 for 21 years. Millington had purchased the reversion under licence from the earl dated 17th June 1584.

f. 8.　Richard Bedoe holds by Indenture from the earl, for 40 years, dated 10th April 1583, a tenement called 'le Red Crosse', late in the tenure of Edward White,[1] glover, between the tenements of A. Millington E., and of T. Ellice W., abutting on the highway N., and 'le bowling Alley of Arundell place', S.   Rent 20s.

'This tenement was new builded by Richard Bedoe about three yeeres past and is in good reparacions.'

Thomas Ellice, cordwainer, holds by Indenture from Henry, earl of Arundel, to Joseph Elstrack, dated 22nd August 1575, for 21 years from the expiration of a demise to Katherine Bray dated 10th November 1559, for 21 years from Lady Day 1560, a tenement called 'le Pye', late in the tenure of John Wallen,[2] haberdasher, between the tenements of R. Bedoe E., and J. White W., abutting on the highway N., and the tenement of R. Bedoe S. Rent 15s.

'This tenement is verie old buildinge and in neede of reparacions.'

f. 8b.　Philip, late earl of Arundel, granted a lease in reversion to John Keeper on 20th April 1583 for 21 years. 'Mr. Bedoe hath bought this revercion of Thomas Ellice.'

John White, painter stainer, holds by Indenture from the earl, dated 7th December 1581 for 21 years, a messuage between the tenements of T. Ellice E., and of L. Forman W., abutting on the highway N., and the tenement late the garden of R. Seale S.   Rent 46s. 8d.

'This tenement was new buylded by John White about x yeeres past and is in good reparacions.'

Leonard Forman, haberdasher, holds by Indenture from the earl to Dedict Domayes,[3] dated 5th June 1581, for 21 years, a messuage between the tenements of J. White E., and of R. Seale W., abutting on the highway N., and the tenement late the garden of R. Seale S.

f. 9.　Rent 40s.

'This tenement is new builded by Leonard Forman towards the streate about v yeeres sithence, and the backe partes are of old buylding and in reasonable reparacions.'

Robert Seale, gentleman, holds by Indenture from the earl, dated 20th May 1584 for 31 years, a messuage called 'le Axe', with free passage and repassage to the Thames 'per venellam predicti nuper Comitis que ducit versus austrum', between the tenements of L. Forman and T. Ellice E. and of N. Wright W., abutting on the highway N., and 'venellam predictam adiacentem iuxta parietem de le Bowling Alley et le Ortyard de Arundell Place, que ducit ad Strond lane versus austrum et occidentem.[4] Quod quidem tenementum habet quoddam gardinum iuxta gardinum predicti nuper Comitis in tenura Thome Ellice ex parte oriente et gardinum predicti nuper Comitis in tenura Nicholai Wright et assignatorum Roberti Cooke ex parte occidentali', and abuts on the tenements of L. Forman and J. White and the house of R. Seale N. and 'le Bowling Alley' S.   Rent. 4li.

f. 9b.　'The back partes of the said tenement be new builded by Robert Seale, gent., about v or vj yeeres past, but the fore partes of the foresaid tenement are old buylding and in some decay.'

Nicholas Wright,[5] 'sadler,' assignee of Sara Mintse, holds by demise from Lord Lumley to Robert Cooke, dated 25th May 1575, for 41 years, a messuage called 'le Spread Eagle' with free passage to the Thames by the earl's lane leading to Strond lane 'versus occidentem': lying

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[1] E. White appears in the Churchwardens' Accounts for 1575-6.

[2] Wallron in Churchwardens' Accounts.

[3] Called Tydy Dobmes in the Churchwardens' Accounts for 1575-6.

[4] This seems to indicate that the lane turned east along part of garden of the Axe on its north side, and stopped at the east end against another piece of the same garden.

[5] Called Nicholas White in the Churchwardens' Accounts for 1575-6.

between the tenements of Robert Seale 'unius valectorum Cancellarie Domine nostre Regine' E., and the tenements of Richard Cokson, tailor, and Richard Lyne, painter, 'de terris Johannis Roper militis' W., abutting on the lane which leads to Strond lane S., and the highway called Strond N.   Rent 66s. 8d.

'All the back partes of this tenement be very ould and decayed and out of reparacions. But the forepart of the same tenement was builded about two or three years past by Nicholas Wright and one Robert Rowley assignes to the said Robert Cooke, and that fore parte is in good reparacions.'

Philip, late earl of Arundel, granted a lease in reversion to Lewes Stewer on 16th July 1584 for 9 years.

'Summa Totall of all the Rent of the Capitall messuage and tenementes aforesaid lxiiij*li*. f. 10. xviijs. iiij*d*.'

Reprises.

Touching Reprises the Jurors found :—' By an ould grant dated the first day of March 1534 made by John, late Bishop of Bathe and Wells, to his mother Anne Brownewich of the keeping or of the office of keeping Arrundell house . . . and Receivor and Collector of all the tenementes therto belonging for the term of lxj yeeres from the date thereof, with the yeerely wages of ij*d*. ob. per diem and of vj*li*. xiijs. iiij*d*. per annum to be payd yeerely by his own hand, or by the handes of the Bishop of Bathe and Wells for the tyme being . . . and one robe or livery, and also for her dwelling the house by the inner gate there with the garden and tenement abutting upon the Kinges waie: which graunt is confirmed by the Deane and Chapter the xxvj[th] yeere of King Henry the viij[th] . . . whose interest in the said premisses we are informed is in one Isabell Santalbin, yet alive at———— in the Countie of Cornwall as we be enformed.'

By another writing undated Henry, late earl of Arundel, granted William Seintabyn, gent., f. 10b. and Isabell his wife for their lives in survivorship an annuity of 10l. payable out of the tenements belonging to Arundel House.

On 7th May 1560, John, Lord Lumley, granted Isabell Sayntabyn, widow, an annuity for life of 4l.

On 4th November 1572, Henry, late earl of Arundel, granted Richard Bedow for life 'the office of keeping of Arrundell place and the keeping of the house there wherein Ann Bright, widdow, then dwelt and the office of Collection of all the Rentes belonging to Arrundell house in Strond, with all such fees as——Santalbin or any other had or received for the said office'.

On 4th September 1587, Philip, late earl, granted Bedow 'the keeping of the said Arrundell place and collecting of the rents belonging to Arrundell place for the tearme of his life with a fee of lxs. xd., with a proviso that when a former deed made to Sayntabyn shall end that then the payment of the said lxs. xd. shall ceace, and in liew thereof the said Richard Bedow shall have during his life the tenement wherin M[rs] Bright now dwelleth joyning to Arrundell gate'.

On 7th April 1560, Lord Lumley granted Mary Isham an annuity of 53s. 4d.

On 7th April 1560, Lord Lumley granted Ann Launsford 4l. for life.   f. 11.

'Sum totall of all the foresaid Reprises, xxx*li*. vijs. vj*d*.'

'And so remaineth clere xxxiiij*li*. xs. xd.'

The Jury also presented a deed dated 9th January 1558–9, between Henry, earl of Arundel and John, Lord Lumley, his son-in-law 'witnessing that in respect of the espousalls had between the said Lord Lumley and Lady Jane the eldest daughter of the said Earle and in consideration of a joynter to her made by the said Lord Lumley, and for that the said Lord Lumley had then yssue a son and a daughter by the said Ladie Jane, and for that the said Lord Lumley was then to pay dyvers sums of money to dyvers persons owing by the said

f. 11b. Earle', the earl demised the honour, castle, town, and manor of Arundel and lands in various counties to Lord Lumley for one hundred years at a rent of 20s.: which Indenture was acknowledged by the earl in Chancery on 27th March 1559.

As touching her interest in Arundel Place Lady Arundel showed the Jury several Indentures. (1) An Indenture in four parts dated 1st September 1570 assuring Arundel Place and the lands and tenements to Philip, earl of Surrey, and the Lady Anne his wife, for their

f. 12. lives. (2) An Indenture dated 3rd May 1583 whereby Arundel Place was conveyed to Henry, earl of Northumberland, Thomas, Lord Paget, and Lawrence Banaster to the use of Philip, earl of Arundel and the Lady Anne for their lives. 'And for anything the said Jury can understande the Remainder is in the Queenes Ma^{ty}.'

Touching wastes and spoils done since the Attainders the Jury find none. 'And for encrochementes they say that vpon theire veiwe of a certeine lane of the late Erles leading along on the outsyde of the Ortyard Wall of Arundell place towardes the north, by measure the same lane conteyneth in length from the end of the bowling Alley of Arundell place vnto the lane called Strond lane lv yardes,[1] and at the two endes it conteyneth in breadth iiij yardes and a quarter, so that within the same lane divers other lordes abutting on the same do by theire Walles come into the Lane and do scant the bredth which it conteyneth at both endes in maner and forme following.'

'ffirst William Esgrige his garden and Leystale for doing[2] with a bryck wall towardes the west end of the same lane doth butt upon the same in length xxiiij yardes, which being mesured in the mydest and at or towardes the endes is encroched into the lane in one place ij yardes and a quarter, in another parte one yard and iij quarters and in the third place one yarde.'

f. 12b. 'Sir John Roper, knight, doth also with his garden and brick wall new erected butt and bound vpon the same lane in length viij yardes, which wall standeth into the same lane the whole length thereof two yardes and a quarter, as we think encroched.'

'John Gardener, gunmaker, his house, garden and garden wall newly erected both butt and bound upon the same lane in length vj yardes and a half, in which whole length his said house and wall standeth into the said lane two yardes, as we thinke encroched.'

'Richard Lyne, paynter, his garden and wall of bryck, newly erected, doth abutt in length vpon the said lane x yardes and a half, in which whole length his said garden and wall stretcheth into the lane one yard and three quarters, as we demed encroched, the said Richardes said garden being raysed at the est end thereof doth lye upon a part of the tenement of Sara Mynche to the rotting of the plates and postes of the said part of the said tenement.'

'Also the said Jurors vpon theire said veiwe at the Est end of John Bells tenement, being the vttermost tenement of the rentes Estward, that there is a Chanell or place for water to com into the strete before the said tenement betwene the tenement of one Britten, decessed, and the said Bell, whereof ere tyme som question hath ben made betwene the said parties, the which Cource wee cannot deeme but to belong to the tenement of the said Bell.'

'There is a house builded by one widdowe Jacson adioyning to the wall of Arundell place on the Est part, whose Dripp doth abutt xiiij foote Dropp into the ground of Arundell place.'

'Of late tyme a way or passage was left betwene the north syde of Arundell place and the tenementes of the same leading from John Hordens tenement vnto the furder end of widow Wales tenement towardes the West, which was called a lader place to see and repaire Arundell

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[1] This would be approximately the length to the point where the lane again turned east; the lane does not seem to have extended so far as the actual end of the Bowling Alley.

[2] *Sc.* dung.

place proper, or perteyning to the house and tenementes belonging to Arundell house, as well for repayring of Arundell house as also for the necessary vse of the said tenementes.'

'The said Jurors vpon theire veiwe do fynd the Conduit head, which serueth Arundell f. 13. place, standing vpon a pece of ground which is one way v yardes or therevpon, and the other way vj yardes and a half or therevpon, which ground Clementes Inn hath incroched by jetting a study newly erected over the same ground, which is one yard and a half and halfe a quarter one way and two yardes lack half a quarter the other way.'

'John Bruer, a carpenter, hath vpon the same ground encroched a paire of Steares a yard and a half into the same ground, and an other jetty of halfe a yard in bredth the whole bredth of the ground, and the said John doth vse the same whole place to laye in tymber and other lumber, which breaketh and decayeth the said Conduit head : and hath broken through the wall joyning to his house (which is halfe a yard thick) a dore to go into the same of late yeeres.'

'Vpon their like veiw they do fynd that the Aide to the said Conduit head conteyneth one way iij yardes and a quarter, and as much the other way, square.'

'The said Ayd to the Conduit head belonging to Arundell place is inclosed by one Mr. Willoughby, by what right we can not lerne, with a bryck Wall but as yt is reported by ancyent men the same ayde together withe the pipes leading therefro to the Condyt hed aforesaid was alwaies tyme out of mynd uninclosed, so as the owners of Arundell place had liberty to veiw and mend the same, the which now by occasion of the said inclosure and dyuers other tenementes and houses buylded ouer the said pype by Sr William Hollyes, Assignes without theire lycence, the pypes nor ayd can be veiwed, so that the Inhabitantes in theis new buyldinges in theire sellors may take quylles out of the said pipes, not sufferable.'

'The said Jurors vpon theire said veiw do fynd and present vpon the vjth Article, what f. 13b. back doores or buildinges anoying or like to anoy the houses or tenementes, or other anoyaunces be made at or about the premisses, that William Esgrige doth make a leystall or place to lay on dung (his house being an Inn) which doth anoy the Ortyard and Lane aforesaid of the said late Erles, which Dunghill doth sewe into the said Lane, and also the whole Course of his water runneth into the same Lane, being much and filthy to the great anoyance thereof.'

'John Gardener hath buylded vpon his wall butting vpon the said Lane a Smithes forge in which he forgeth guns, the smoake whereof doth much anoy the whole house called Arundell place and the pryuat walkes in the Ortchard thereof and also many of the tenantes and tenementes belonging to Arundell place, to a great anoyance of the same.'

'The said John hath a comon sewer into the said lane to the anoying of the same.'

'Out of the said new erected forge he hath dyvers glasse windowes, whereby he may take the veiwe of the gallery Windowes and whole Walkes of the Ortchard of Arundell house to the anoyance thereof; and hath a dore into the said Lane by sufferance of one Ralphe Cooke, decessed, a tenant of Arundell rentes, and for som rent as it is reported payd to him for the same.'

'Richard Lyne hath also a common sewer into the sayd Lane to the anoying thereof.'

'Sr John Roper, knight, hath a dore into the said Laine by like sufferance, and a sewer for water to the annoying thereof.'

'Vpon theire said veiwe they doe fynd and present that before the Dore of the Condyt head by the Inhabitantes nere adioyning great anoyance made there, viz. as casting dead f. 14. dogges and cattes there and all maner of filthe, and also there is by the descent of the ground to the said dore a curant of water, which runneth into the Dore of the said Conduyt, whereby it cannot be but the water must be anoyed, the head decayed and the pipes rotted with the filth.'

'They do also fynd that in the garden of the said Widdow Jackson towardes the Est syde of Arundell place there is a pryvy or Seege joyning to the said wall.'

' The Measure of the pypes leading to Arundell house as they doe lye.

'ffrom the Ayde to the Conduyt head iiijˣˣ xv yardes.

'ffrom the Conduit head to the retourne of the Court of Clementes In xv yardes di.

'ffrom the said Retourne in Clementes In Court, xviij yardes di.

'ffrom the Corner of Clementes In Court to the Corner of the tenement called the Lamb xxix yardes.

'ffrom the Corner of the Lamb to Mr. Harburnes Corner entring into the narrow passage into S^t. Clementes Churchyard at the west end, xxij yardes di.

'ffrom Mr. Harburnes Corner over the Churchyard to the Churchyarde wall southward, xlj yardes di.

'ffrom the Churchyard wall by the South Dore of the Church to Arundell house gate, xxxvij yardes.

f. 14b.   ' The said Jury do fynd and present that Phillip, late Erle of Arundell at the tyme of his Atteynder was seazed of an estate to him selfe and the ladie Ann, his wife, and to the heires of the said Erle, of and in the foresaid Capitall messuage and all other the tenementes above mencioned.'

' And that the said Erle hath heires, a Sonn of the age of iiij yeeres and a Daughter of the age of vj yeeres or thereabouts, both now living in the parishe of St Clementes Danes without Temple Barr, London.'

'We fynd that the said Phillip, late Erle of Arundell, is yet lyving, by reason whereof and by force of his Attaynder her Matie is to have the Rentes, Revenues and proffyttes of the said Cheefe house called Arundell house and of all other the landes, tenementes and hereditamentes thereto belonging or so accepted during the lyfe of the said Erle, and after his deceace to remaine to the said Lady Anne, the late Countess his Wife, ffor tearme of her lyfe : and after her decease to remayne to her Matie in the right of her highnes Crowne by the atteynder aforesaid.'

2. THE SITE OF BATH INN IN THE REIGN OF KING JOHN

This Deed (*Ancient Deeds* A. 1665 P. R. O.) clearly relates to the piece of land which Eustace de Fauconberg, when bishop of London (1221–8), granted to Bishop Joscelin of Wells. The date must be before 1221 and was probably early in the reign of John. Reiner, son of Berenger, was sheriff of London in 1156–9 and 1162–3 ; he had three sons, Richard, Henry, and William, who were all prominent London citizens ; Richard was sheriff in 1189–90, and Henry was an alderman (*Ancient Deeds* A. 2690). As suggested on p. 243 above, the land reserved to William the Carpenter may probably include the piece between Strand Lane and the later ' Cardinal's Hat ', which never formed part of the precincts of Bath Inn.

Sciant presentes et futuri quod ego Henricus filius Reineri dedi et concessi et hac presenti carta mea confirmaui Eustach. de falconberg. vel quibus dare voluerit totam terram meam quam habui de feodo Roberti de harocurt in parochia sancti Clementis dacorum simul cum terra que fuit Ricardi le fruiters cum omnibus pertinenciis suis, saluis Willelmo carpent. et heredibus suis tribus mesagiis que de me tenet, que habent quadraginta vlnas et dimidiam in latitudine ^{1} et in capite uersus vicum viginti unam vlnam (*sic*) et tres quarterios in latitudine et in alio capite descendendo uersus thamisiam viginti quinque vlnas et vnum quarterium in latitudine : habendam et tenendam eidem Eustach. vel quibus dare uoluerit de me et heredibus meis libere, quiete, pacifice, integre in feodo et hereditate : reddendo tamen annuatim mihi et heredibus meis

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^{1} *Sic* in original, but apparently it should be *longitudine*.

dimidiam marcam argenti ad quattuor terminos anni scilicet ad natale domini viginti denarios, et ad pasch. viginti denarios, et ad natiuitatem Sancti Iohannis Baptiste viginti denarios, et ad festum Sancti michaelis viginti denarios pro omnibus seruiciis et consuetudinibus et exaccionibus Et ego henricus vel heredes mei non possumus aliquo modo a iam dicto Eustach., vel ab eis quibus eam dederit, deospitare pro nobis vel pro nostris nec pro aliquibus aliis ospitandis. Et licebit predicto Eustach. vel illi (*sic*) quibus eam dederit predictam terram dare vel uendere vel inuadiare preterquam Iudeis, salua mihi et heredibus meis dimidia marca ad terminos prenominatos. Ita tamen quod si prefatus Eustach. vel illi quibus eam dederit predictam terram dare vel uendere uoluerint, ego henricus vel heredes mei propinquiores erimus epmcioni[1] de duobus bisanciis quam aliquis alius. Hanc autem prenominatam terram cum pertinenciis ego Henricus et heredes mei contra omnes homines et omnes feminas predicto Eustach. vel quibus eam dederit per predictum seruicium warantizabimus: pro hac autem donacione et concessione et hac carte mee confirmacione dedit mihi predictus Eustach. tres marcas et dimidiam argenti in gersumam. Hiis testibus Iohanne de Gestling, Willelmo capellano de Stranda, Ricardo filio Edwardi tunc sokereue, Waltero filio cecil., Willelmo Mustard, Willelmo Francigena, Ricardo fabro, Hugone de Dauintre, Roberto et Willelmo clericis, Rogero Gulafr., Roberto Malluuel, Gile de Enle, Willelmo de bosco, Roberto de Muta, et multis aliis.

[1] *empcioni*

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