

EXCAVATIONS AT THE DESERTED MEDIEVAL VILLAGE OF HANGLETON

Part I

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The expansion of the Borough of Hove on to the downland in 1952 threatened either to bury or remove all the remains of that part of the village of Hangleton which disappeared in the Middle Ages. The Brighton and Hove Archaeological Society, with the permission of the landowners, undertook such excavations as were possible in front of and during building operations. The preparations for the foundations of a Church Hall brought to light the remains of the Parsonage House. These excavations are described in Part I.¹

Hangleton Way, between the old railway crossing and Building 5, passed through no buildings (Fig. 3). Owing to rapid development the Ministry of Public Building and Works excavated an area between Buildings 2 and 3. For these excavations see Part II.²

THE SITE

Topography. The downland parish of Hangleton,³ once almost entirely devoted to agriculture and sheep, since 1927 has been included within the Borough of Hove. Houses now cover the south-eastern portion and two golf courses occupy much of the land;

¹ Thanks are due for permission to excavate to the Borough Surveyor and the Corporation of Hove, Messrs. Brayboms Ltd., Tamplins Ltd. and the Reverend P. Bide, then of St. Helen's Church. The writer is indebted to many specialists (most of whose names are mentioned elsewhere) and others who have given of their time and knowledge to assist in preparing this report: for general guidance, advice and criticism to Dr. A. E. Wilson, Mr. L. F. Salzman and Mr. J. G. Hurst. A particular word of thanks must be given to Mr. R. B. Tibble for the painstaking research which forms the basis of the historical discussion and to Mr. A. E. Smith for most of the pottery drawings and the greater part of the text of that section. The valuable assistance of many voluntary excavators is acknowledged, among whom the following must especially be mentioned: Mrs. Hilda G. Holden, without whose practical help and encouragement the excavations might never have taken place; Messrs. Bishop, Burstow, Cole, Goodchild, Hartridge, Heath, Hedgley, Hiscoke, Kyrke, Norris, Priestley, Tilley and Witten. The Ministry of Public Building and Works kindly made a grant towards the cost of publication. An earlier grant by the same Ministry enabled paid labour and a mechanical excavator to be hired at a time when Building 8 was threatened by building operations.

² To be published in a forthcoming volume of *Sussex Arch. Coll.*

³ Not to be confused with a farm of the same name in the parish of Ferring (Nat. Grid Ref.: TQ/089035).

HANGLETON MEDIEVAL VILLAGE SITE

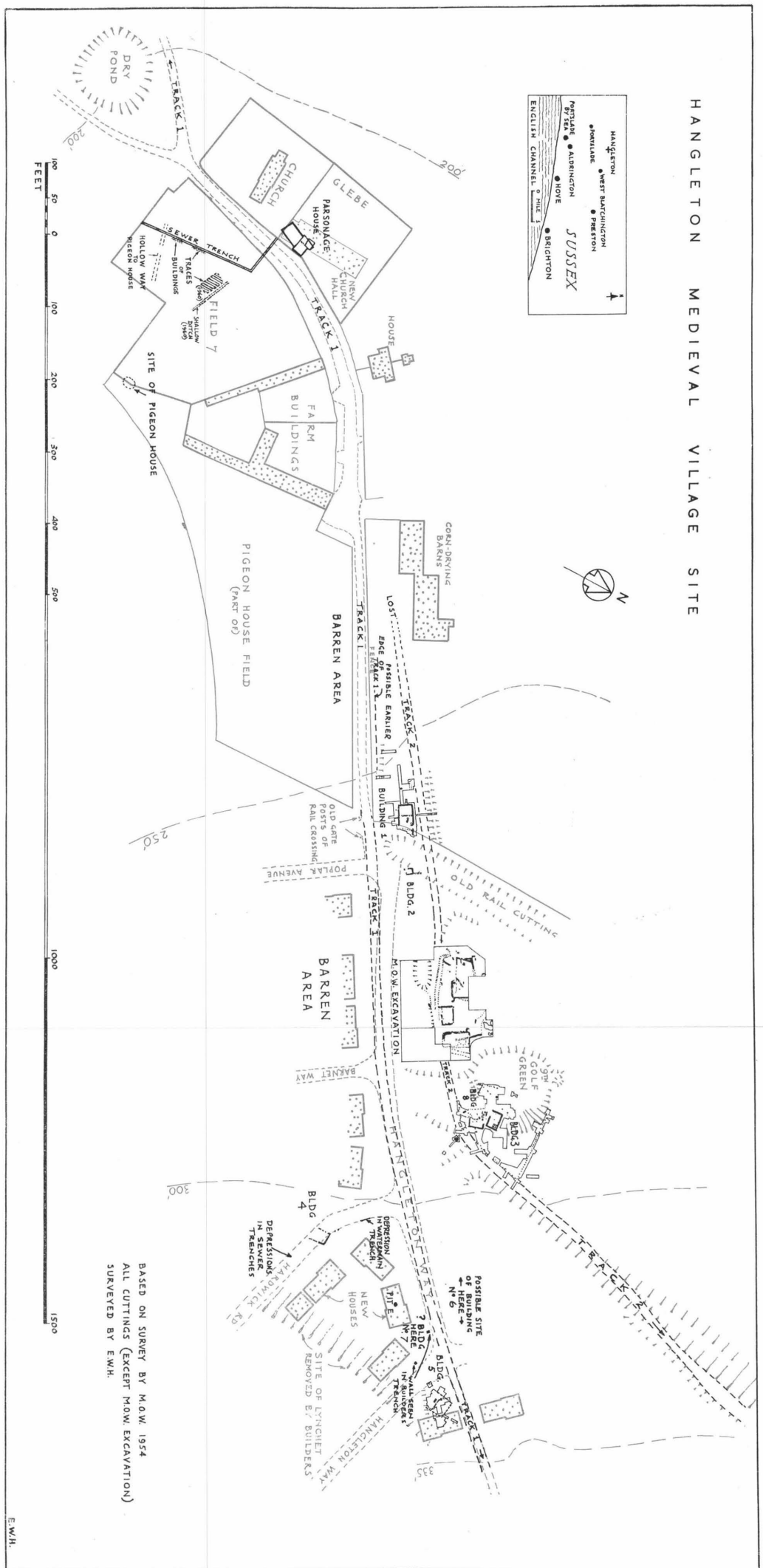


FIG. 3. GENERAL PLAN OF EXCAVATIONS (IN BLACK). MODERN ROADS AND BUILDINGS EXISTING IN 1954 ARE SHOWN IN RED.

BASED ON SURVEY BY M.O.W. 1954
 ALL CUTTINGS (EXCEPT M.O.W. EXCAVATION)
 SURVEYED BY E.W.H.

E.W.H.

the remainder is still farmed. The parish covers an area of 1,120 acres, forming a rectangle, approximately two miles from north to south and three quarters of a mile broad.¹

The Norman church of St. Helen is situated on the south-eastern slopes of Round Hill about two miles from the sea. Prior to 1952 the only buildings near the church were one pair of semi-detached 19th century cottages and a group of farm buildings, the oldest of which was not earlier than the 18th century.²

Lying in a sheltered valley, a quarter of a mile south-west of the church, is Hangleton Manor House, a large building generally of 16th century date, although the west wing may represent the shell of the 15th century manor house. To the west and south of the Manor House stood numerous farm buildings, which were removed in 1956 to make way for houses. Another cluster of farm buildings and a few modern cottages are to be found a short distance north-west of the Manor House representing Benfield Farm which once formed part of a second manor in Hangleton known as Hangleton and Benfields, alias Hangleton-Benfields, possessing a manor house which was demolished in 1871.³

The 1879 O.S. 6in. Sheet LXV has an entry 'Site of the Ancient Village of Hangleton,' marking correctly the disturbed ground of the medieval site (Fig. 1). The Nat. Grid Ref. is TQ/268074.

A railway line from Hove to the Devil's Dyke, which was opened in 1887 and closed in 1938, crossed the village in a northerly direction passing through parts of Buildings 1 and 2. East of the railway the ground had been disturbed considerably by an embanked golf green, several tees, bunkers and other hazards, practically obscuring the medieval remains.

The site of the excavations lies between the 250ft. and 325ft. contour lines and commands a fine view of the coastal plain and sea. In periods of cold weather, however, it is a bleak and wind-swept situation, unlike the lower lying Manor House and Benfield Farm, which are sheltered by the adjoining downland spurs.

Geology. The medieval site lies on Upper Chalk covered by a few inches of topsoil mixed with flints. The crest of the spur south-east of Round Hill appears to be capped with a layer of Tertiary Clay-with-Flints which was noted to be about 12ft. thick when foundation trenches for a school were dug at the highest point of the West Blatchington-Hangleton parish boundary. The Clay-with-Flints decreased in thickness with the descending slope, continuing at least as far as the old railway embankment on the eastern side of the site. It is mapped *c.* $\frac{3}{4}$ mile north-east and *c.* $1\frac{1}{2}$ miles west-south-west. The Chalk is a good source of water, and local perennial springs are common along the foot of the escarpment. Some

¹ *V.C.H. Sussex*, VII, p. 277.

² The farm buildings were demolished in 1959.

³ *Ibid.*, see also 'Hangleton and its History,' by C. E. Clayton, *Sussex Arch. Coll.* (hereafter abbreviated to *S.A.C.*) XXXIV (1886), pp. 167-84.

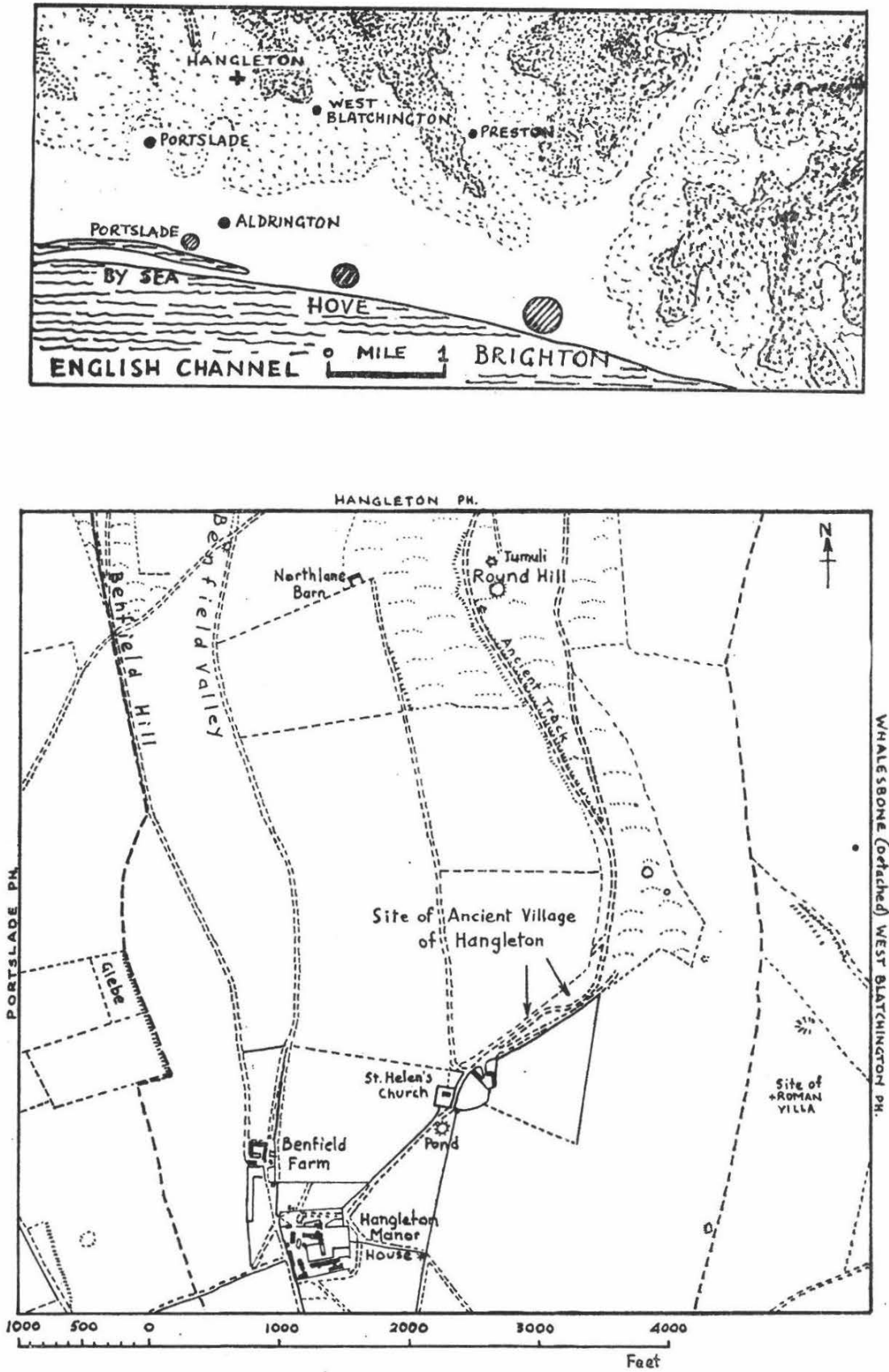


FIG. 1. UPPER: AREA PLAN. LOWER: PART OF 1879 O.S. 6IN. SHEET LXV MARKING THE SITE OF THE ANCIENT VILLAGE.

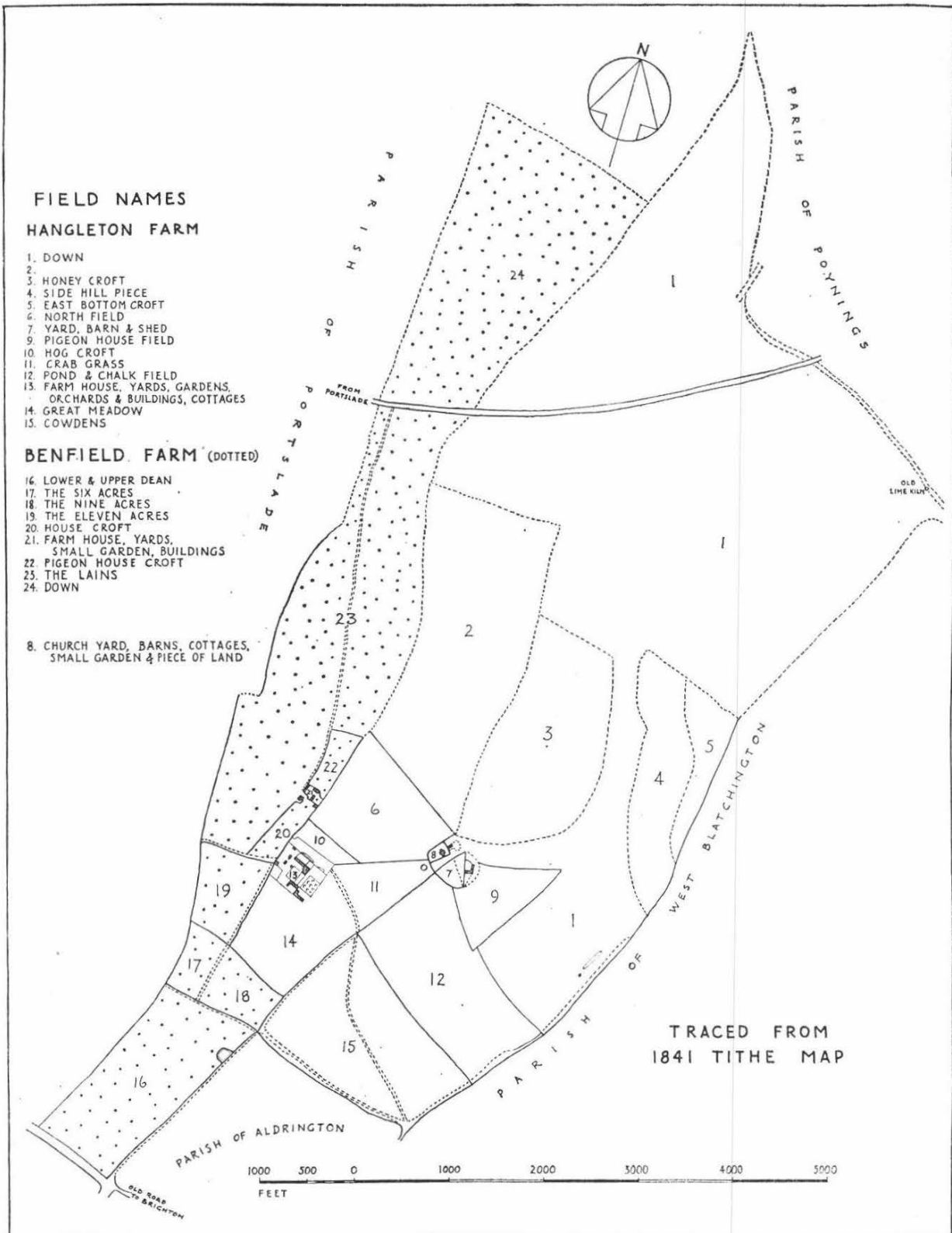


FIG. 2. PLAN OF THE PARISH IN 1841. THE SECOND MANOR OF BENFIELDS IS SHOWN DOTTED. (FROM A TRACING OF THE TITHE AWARD MAP IN THE CUSTODY OF THE COUNTY ARCHIVIST OF EAST SUSSEX).

of the chalk is slightly argillaceous and suitable for the production of 'grey,' or 'stone' lime. Greyish fine sands are available from a raised beach at Portslade, though not easily, and superficial gravel and shingle are suitable for coarse aggregate.

Water Supply. The water supply for the village was not discovered. The pond south of the church, which is not shown on Edwards' map (1795), was destroyed before it could be excavated. It is possible for well-trodden chalk kept constantly wet to retain water and a large depression in the chalk was seen to hold water for a few days after heavy rain. Had there been a well on the 250ft. contour it might have been at least 150ft. deep in the 13th century.¹ Such a well was not found, but this does not preclude the possibility of there having been one. While catchment ponds may have provided some water during the wetter periods of the year, and in the absence of a well, it is probable that much of the water would be carried from the valley where there would have been a well for the Manor House.

Field Boundaries and Ploughing. The neighbouring downland, more particularly to the north and west, has many lynchets of 'Celtic' type,² but there is no evidence in Hangleton parish of any being directly attributable to the medieval period, neither are field boundaries of the latter age to be distinguished. That there had been considerable ploughing of the land surrounding the site in medieval and later times, particularly to the east, was evinced when a modern roadway cut through the lynchet east of Buildings 4 and 5 revealed an accumulation of soil, 2ft. thick, above the turf line of the ancient lynchet.

The distinctive remains of ridge and furrow ploughing like that surrounding many Midland medieval villages is not to be seen at Hangleton. Traces of this system of ploughing do not appear to have been recorded anywhere in the county; neither are there any visible remains of downland 'broad rig'³ near the village. No high strip lynchets are to be seen, the nearest being 2½ miles north-west by the deserted downland farmstead of Perching (TQ/243103). In 1950, before later ploughing, in the northern part of the parish of West Blatchington, one mile north-east of Hangleton church (TQ/281080) there could be seen rather indistinct traces of medieval-type strips. These showed as very faint lynchets running north to south on the opposing flanks of a downland coombe, mainly on the slopes above high 'Celtic' lynchets. There were no signs of ridge and furrow. One of the reasons for the absence of ridge and furrow

¹ Mr. F. Needham Green, Waterworks Engineer to Brighton Corporation, kindly provided this information.

² Heavily ploughed since 1950.

³ Very low ridges wider than 5yds., known to be widespread on chalk downland in Wiltshire, but occurs also in Dorset, Hants. and Berks. See 'Ancient Fields,' by H. C. Bowen, *Brit. Assn. for the Adv. of Science* (1961). Mr. Bowen states that 'broad rig' probably extends into Sussex.

may be that the plough used locally in medieval times was the turn-wrest, or one-way plough, which is not conducive to the formation of ridges as is the plough with a fixed mouldboard.¹ A photograph depicting ploughing in 1892 at West Blatchington shows six oxen drawing a turn-wrest wheeled plough. This plough is similar in principle to the Kentish plough.² The antiquity of the Sussex plough is emphasised by A. Beckett,³ Richard Jefferies,⁴ and there is a description of the Sussex downland turn-wrest plough by F. Harrison.⁵ The turn-wrest plough, used on Sussex downland for many generations until mechanisation, may well be the same type that was in common use on the same terrain in the Middle Ages.

The Domesday Village. The Domesday Survey records forty-four villeins and bordars living in Hangleton, apart from those in neighbouring Benfields, who, with their families made a sizeable population. With the exception of slight traces of 12th century features all the buildings excavated are not earlier than the 13th century. Despite the careful watching of modern building sites near the Manor House, church and elsewhere no trace of the Domesday settlement was found. It may be that the earlier inhabitants occupied the area covered by the Manor House and its farm buildings, or other land to the south-east built on prior to 1952. The ground north of the Parsonage House, where not covered by modern buildings, has no surface indications of occupation. One might expect the 11th century village to be near the church, but there is no sign of it. If it is assumed that the earlier dwellings were situated at some distance south of the church, perhaps near the present Manor House, the excavations uncovered what might be a 13th century village expansion, or a general migration from the older site. It is unlikely that the Domesday village will now be discovered.

HISTORICAL DISCUSSION

Throughout all available records there is considerable confusion between the Manor of Hangleton and the neighbouring Manor of Benfields. It is probable⁶ that the entry in the Domesday Survey of 1086 concerning 'Esmerewic' is the record of this second manor in Hangleton. The latter is not to be confused with Twineham-Benfield, the home of the Benfield family, which later gave the name

¹ Cf. 'Ploughing and Field Shape,' by M. Nightingale, *Antiquity*, XXVII (1953), pp. 20-6; also H. C. Bowen, *op. cit.*

² M. Nightingale, *op. cit.*, pl. iia. The W. Blatchington photograph is in my possession.

³ 'The Ox Team in Sussex,' *Sx. Cty. Mag.*, I, pp. 462-9.

⁴ 'The Southdown Shepherd,' from *The Spring of the Year* (ed. S. J. Looker, 1956).

⁵ *Sx. N. and Q.*, III (1930), pp. 46-9.

⁶ *V.C.H. Sx.*, VII, p. 280. Esmerewic has not been identified by S. H. King in 'Sussex,' *The Domesday Geography of South East England* (ed. H. C. Darby and E. M. J. Campbell, 1962), p. 418.

'Benfields' to the second manor.¹ The translation of the full Domesday entries reads:

'William de Wateville holds of William (de Warenne) Hangleton. Azor held it of King Edward. Then it was assessed for 14 hides and 1 virgate. Now for 8½ hides. There is land for 8 ploughs and (there are) 31 villeins and 13 bordars with 5 ploughs. This estate was part of (jacuit ad) Chingestune² a manor of William de Braiose. In the time of King Edward, as now, it was worth £10. When received £8.'

'Nigel holds of William (de Warenne) Esmerewic. Azor held it of King Edward. Then, as now, it was assessed for 1 hide and a half. There is land for 4 ploughs and (there are) 4 villeins and 6 bordars with 2 ploughs. In the time of King Edward it was worth 40s. and afterwards 30s. now £4.'³

The descent of the manors will not be described as fully as possible as this has been done elsewhere.⁴ The principal names connected with the two manors until the 16th century are:

Hangleton

Ralph de Chesney, son-in-law of William de Wateville.

William de Warenne II, in 1098.

Cockfield, or Cukufeld, from the 12th century until 1291. This family also held half of Aldrington.

Luke de Poynings and descendants, from 1291 until 1446.

Eleanor, wife of Sir Henry Percy, from 1446-1484.

Henry Percy, Earl of Northumberland, from 1484-1531.

Richard Bellingham of Newtimber, in 1538, also Aldrington.

Benfields

Ralph, son of Nigel.

Descendants of Ralph called 'de Hangleton' were afterwards in possession of part of this manor. This name recurs until 1349. Ralph de Meyners shared three knights' fees with Cardo de Hangleton in 1242-3.

Agnes, widow of William de Benfield, inherits from R. de Meyners in 1247.

Richard de Benfield, son of Agnes, acquired further land from Richard de Hangleton in 1272.

John de Benfield, in 1296.

¹ The confusion is not eased by the fact that 'Esmerewic' is known as 'Hangleton' until the beginning of the 17th century when the name 'Benfields' is adopted. See *V.C.H. Sx.*, VII, p. 280, footnote 69.

² Kingston Buci.

³ Translation from *V.C.H. Sx.*, I, p. 439. In D.B. entry for Kingston Buci, it is recorded that 6 hides are in Rape of Wm. de Warenne. Editor of *V.C.H.* points out that the 6 hides should probably read '14 hides.'

⁴ *V.C.H. Sx.*, VII, pp. 279-80.

Another John de Benfield in 1412, after which this manor descended with the manor of Twineham-Benfield.

William Covert in 1485 and this family until the 17th century.

The derivation of the name 'Hangleton' may be from Old English *hangra-tun*, meaning 'farm by the sloping wood.'¹

The addition of a tower to the church in the early-13th century and the reconstruction of the chancel *c.* 1300 suggests a reasonably prosperous and expanding community. In an effort to investigate what is happening to the manor of Hangleton during this period, let us first examine the Subsidy Rolls of Fishersgate Half-Hundred in the Rape of Lewes for the years 1296, 1327, 1332 and 1334.² The Half-Hundred consisted of the three manors—Hangleton, Aldrington and Portslade (ignoring Atlingworth, except in the 1296 Roll, belonging to the Lewes Priory of St. Pancras).³

The 1296 Roll does not show the individual contributions of the manors. The tax was levied mainly at one-eleventh of a man's goods, and the total tax demanded from the Half-Hundred was £19 8s. 10½*d.* The 1327 tax was levied at one-twentieth and the 1332 and 1334 taxes at one-fifteenth. In the 1327 and the 1332 Rolls the contributions of the manors are shown separately.

1296	Value of Fishersgate Half-Hundred	—£19	8s.	10½ <i>d.</i>
1327	" " " " " "	— £7	4s.	9 <i>d.</i>
1332	" " " " " "	— £7	12s.	0 <i>d.</i>
1334	" " " " " "	— £9	5s.	0 <i>d.</i>
1327	Value of Hangleton Manor	— £4	6s.	6¾ <i>d.</i>
1332	" " " " " "	— £2	0s.	8 <i>d.</i>
1334	" " " " " "	— £2	18s.	8 <i>d.</i>

It is impossible to draw any detailed conclusions from an examination of the Subsidy Rolls, as the form in which they appear in 1327 and 1332—the years that show the taxpayers' names—is different. In 1327 the Roll contains the two headings, 'Villat de Hangleton,' 'Villata de Portslade.' In 1332 there are three divisions, 'Villat de Hangleton,' 'Villat de Portslade,' and 'Villat de Aldrington.' On the 1327 Roll there are 35 names; on the 1332 Roll 55 names.

¹ *The Place-Names of Sussex*, English Place-Name Society, VII, p. 289. Alternatively, E. Ekwall, in *The Concise Oxford Dictionary of English Place-Names* (4th ed. 1960), p. 217, states: 'The first element can hardly be O.E. *hangra* as no spellings with *r* occur. It is probably another derivative of the verb *hang* with an *l*-suffix, meaning 'slope.' Cf. O.E. *hangelle* 'a hanging thing.'

² See end of this section, pp. 69-71. Reprinted from *Sx. Rec. Soc.*, X (1909), by permission of the Editor. Much useful information is available in 'Early Taxation in Sussex,' by L. F. Salzman, *S.A.C.*, XCVIII (1960), pp. 29-43, and XCIX (1961), pp. 1-19.

³ *S.A.C.*, XXXV (1887), p. 115. Hawis de Guerneio granted to the monks of Lewes all the land of Atlingworth with its appurtenances before 1145. Traces of the medieval farmstead of Atlingworth exist near the barn of the same name (TQ/253089).

Several taxpayers named in the 1332 Aldrington list seem to have been included in the 1327 Hangleton return.¹

There was an Inquisition taken at Poynings on 10th November, 1339, on the death of Thomas de Poynings, by the oath of John de Athalle, Robert de Enloc, John de Holt, Simon atte Nasshe, Richard Taillur, John Gub, William le Clerk, William de Saddlescombe,² John Godwin, Simon de Flegge, Henry de Wyke and Ralph (illegible).³

‘ Thomas de Poynings held in fee the manor of Hangleton with the appurtenances of the said Earl Warenne, by knight service. There is there a capital messuage, worth yearly clear 6*d.*, a dove-cote worth yearly 12*d.* and not more because old and ruinous;⁴ 120 acres of arable land worth yearly 35*s.*, price the acre 3*d.*; a pasture called Shepelese worth yearly 8*s.* 4*d.*; rents of assize £8 11*s.* 9*d.*, payable at feast of St. Thomas Apostle £4 9*s.* 0*d.* and at Pentecost £4 2*s.* 9*d.*; of rent called Eggyngselver 10*s.* 8*d.* payable at Michaelmas; of rent at Michaelmas called Ocsegheld and Saltgheld 4*s.* 1½*d.*; of rent at the same feast 19*s.* 0¾*d.* called aid of the vil; 41 (?) bond tenants whose works from Michaelmas to feast of Annunciation of the Blessed Mary are worth 5*s.* and from then until 1st August 52*s.* 8*d.*; Autumn works worth 24*s.* 10*d.*; works of carrying wood 30 works between (?) St. John Baptist and St. Peter ad Vincula 5*s.*, price of the work 2*d.*; of rent of eggs at Easter 360 (?) yearly (illegible) price per 100 3*d.* Pleas and Perquisites of Court there worth yearly 2*s.*⁵

¹ In some cases it is a relative and not necessarily the same person, e.g.

1332 Aldrington	1327 Hangleton
Rado Slyghbody	Rado Slezbody
Symone Slyghbody	Simme Slezbody
Robto Thom'	Johne Thom'
Willo Cony	Willo Cony
Rico de Hangleton	Rico de Hangleton
Symone Broun	Willo Brun

² Note *Saddlescombe* and *Taillur* (Aldrington); *Holt* (Hangleton); *Nasshe* and *Wyke* (Portslade) on 1332 Subsidy Roll.

³ *Sx. N. and Q.*, V (1934), p. 104. Cf. also *Cal. Inq. Post Mortem*, VIII, pp. 170-1.

⁴ Many dovecotes seem to have been allowed to become ruinous at this time: e.g. Poynings in same Inquisition.

⁵ For a comparable picture of the Hangleton-Benfields manor the following is the Inquisition Post Mortem on John de Benfield who died in 1325:

‘ A capital messuage, 127 acres land, 10 acres meadow, 20 acres pasture, 8 acres wood, 3 acres moor, 22*s.* 7*d.* rent etc., held of the heir of Edmund le Botiller, a minor and in the king's wardship, as of his manor of Shere, by service of a knight's fee; 20 acres of land and a windmill, held of the Prior of Lewes by service of 10*s.* yearly at the feast of St. Pancras, on which day he ought to come to Lewes with 12 others on horseback and spend the day at the cost of the Prior, who shall give him on leaving a cheese, price 15*d.*: which land and mill are not sufficient to pay the rent: and 14 acres of land held of Thomas de Poynings, service unknown.’ (*Cal. Inq. P.M.*, VI, no. 570, p. 360).

The *Inquisitiones Nonarum* of 1340 records the testimony on oath of John atte Holt,¹ Robert Thomas, Thomas Hankyn and William Blood of the parish of Hangleton. They state that:

‘ A tithe of sheaves is worth . . . this year 7 marks (£4 13s. 4d.) and a tithe of wool and lambs 13s. 4d. and not more. The amount of the whole tithe aforesaid 8 marks (£5 6s. 8d.) is all the aforesaid church (St. Helen’s) can be valued at for tithes. And they say that the tithe aforesaid does not correspond nor reach to the valuation of the aforesaid church inasmuch as the rector has a house and garden and curtilage to the value of 10s. The tithe of doves is worth 6d.; the tithe of flax and hemp is worth 5s.; the tithe of sucking pigs . . . and of bees is worth 10s. The fees are worth 11s. They say that several lands in the aforesaid parish were barren and uncultivated in this year the tithe of which used to be worth 13s. per annum. They say the parish of Lewes takes tithes at the same place to the value of 20s. There are not any persons in the aforesaid parish having chattels beyond the value of 10s. nor such as live by their lands and holdings.’²

These *Nonae Returns* record a year of great poverty and hardship throughout a wide area of Sussex. Hangleton has lands ‘barren and uncultivated’ on which the tithe alone was 13s.; Portslade has 60 acres unsown, on which the former tithe was 30s.; Aldrington lost 40 acres to the sea, on which the tithe used to be 20s.³ West Blatchington, close neighbour of Hangleton, has 4 virgates unsown because of the poverty of the parishioners and the tithe used to be 26s. 8d. Farther away, Rottingdean lost 50 acres to the sea and had another 240 acres uncultivated because of the poverty of the inhabitants. In the *Inquisitiones* the causes of poverty are attributed to the cold winter, consequent disease among the sheep and lambs; tempests and land erosion by the sea.

The export of wool from West Sussex ports, in which Shoreham played an important part, was flourishing at the end of the thirteenth century and the early part of the fourteenth, 1309 being the peak year. At that time, West Blatchington and Patcham, neighbours of Hangleton, each pastured between 1,000 and 2,000 sheep. Hangleton’s sheep population is not recorded. In 1340, the one-ninth of wool and lambs in West Blatchington was 33s. 4d., but only 13s. 4d. in Hangleton. West Sussex exports fluctuated considerably and in 1340 they had dropped to one-fifth of the 1309 figure.⁴ Although this may have been due to hostilities with France, the *Nonae Return*

¹ Cf. *Holt* also a juror at Poyning’s Inquisition. *Robert Thomas* is on 1327 and 1332 Subsidy Rolls.

² *Inquisitiones Nonarum*, p. 385.

³ Cf. ‘Remarks on the *Nonae* of 1340, as relating to Sussex,’ by W. H. Blaauw, *S.A.C.*, I (1848), pp. 58-63.

⁴ See valuable papers by Dr. R. A. Pelham on Sussex Medieval Trade, Exportation of Wool, Sheep Distribution and Historical Geography in *S.A.C.*, LXIX (1928) to LXXVI (1935).

for Hangleton suggests that the keeping of sheep, as well as corn production, was not what it might have been.

The poll tax Return of 1377 is non-existent for this part of Sussex.

Bishop Rede's Register 'given in the Chapter House of our said monastery (Lewes) on 22nd March, 1381' contains the entry: 'From the church of Hangleton 6s. 8d.' and 'also in Hangleton, the tenth portion of sheaves and cheese of the manor of the lord of Poynings.'¹ The 6s. 8d. represents a low average figure compared with those of other churches in the Register, but it is far below Portslade's 40s. which ranks among the highest in the record. It is noteworthy, too, that there is no tithe of sheep or wool mentioned in Hangleton, whereas Portslade was required to furnish 'the tenth portion of sheaves, lambs, wool and cheese'

In 1383 Richard de Poynings grants 'an indenture for life to Agnes, daughter of Robert de Northurde, a yearly rent of 54 marks to be taken of the manors of Twynham, Hangleton and Poynings with power to distrain for arrears in these three manors'² To William Callewe, clerk 'a gift for life of a yearly rent of 12 marks on the same three manors.'³

1390 sees permission granted to Agnes to distrain in the manors of Twynham, Hangleton and Poynings, and in four other manors in Kent, 'for the payment of the yearly rent, with arrears, of 54 marks, granted to her by Richard de Poynings, now deceased.'⁴ A mandate is issued to the farmers 'of these manors' to pay the rent with arrears.⁵ But the farmers were not the only ones in arrears. In 1427, 'Robert Benfield 'gentilman' for not appearing before justices of the Bench of Henry V to answer Robert Poynings knight, touching a plea of account; nor before justices of the Bench of the same king, to answer Alice, executrix and late wife of Adam Turke, touching a plea that he render 40s.'⁶

In 1433, six years after a similar episode, Robert Benfield, gentleman, is again in trouble for not appearing before the justices, this time to 'answer Edmund Twyn, citizen and grocer of London, touching a plea of debt of 40s., and to answer William Crowemere touching a plea of debt of 5 marks.'⁷ Yet again, in 1448 he has not appeared 'to answer Henry Dukmonton, executor of the will of Thomas Dukmonton, late citizen and merchant of London, touching a plea that he render 42s.'⁸ The next year sees the Hangleton-Benfield manor in the hands of the Coverts, famous iron-masters at Slaugham.⁹

¹ *Sx. Rec. Soc.*, XI (1910), pp. 379-380.

² *Cal. Close Rolls*, 1st Jan. 1383.

³ *Ibid.*, 5th Feb. 1383.

⁴ *Cal. Pat. Rolls*, 19th March, 1390.

⁵ *Ibid.*, 26th April, 1390.

⁶ *Ibid.*, 28th November, 1427.

⁷ *Ibid.*, 28th October, 1433.

⁸ *Ibid.*, 15th November, 1448.

⁹ *S.A.C.*, XXXIV (1886), p. 175.

The first money valuations of Hangleton in this period are found in 1411, when, we are told, Robert Lord de Poynings has manors worth £143 13s. 4d., of which one is Hangleton valued at £13 6s. 8d.¹ In the same record John Benfield has manors worth £40 of which Hangleton is worth £22.

In 1428 there were only two householders recorded in the parish of Hangleton. These were Roger Smale and Robert May.²

In 1442, on 25th June, R. Hangleton presented John Gervyn to the church of Hangleton. On 15th March, 1444, he presented Thomas Whyte. The entries of these two presentations in the Register of Bishop Praty are made under the heading of 'poor benefices,' having an annual parish return of 12 marks or under.³

In 1499, Richard Scrase, gentleman of Hangleton, is described as a great agriculturist, landowner, brewer and miller. It is probable that he lived in the early wing of Hangleton Place.⁴ He had land also in other parishes. In his will he left to his son James his lands in Midtown (site unknown)⁵ and Hangleton with '1400 schepe whereof 700 ewes, 400 weders and 300 teggs with 2 temes, 100 oxen and 2 plowes.'⁶ There is no record of the division of the sheep between the two named places.

Records after the 15th century do not show that Hangleton recovered its former status as a village. Although in 1517 an Enclosure Commission was formed to enquire into the number of deserted towns and villages in Sussex and the extent of enclosures, no report of this Commission appears to be extant. In 1603, in reply to an enquiry made by the Bishop of Chichester concerning the conditions of the parish, the incumbent, Richard Mann, states: 'In Hangleton the whole parish consisteth of but one house and there are about 16 communicants.'⁷

The Tax for Maimed Soldiers of 1624 has the three entries under the heading of Fishersgate: Hangleton 6s. per annum, Portslade 16s. and East Aldrington 8s.⁸ West Aldrington had by then been lost to the sea.

¹ *S.A.C.*, X (1858), pp. 140-1.

² *Feudal Aids*, V, p. 165. 'In parochia de Hanghelton Rogerus Smale, Robertus May *et non plures*.' The '*et non plures*' is important because the tax on the parish was levied only if there were 'x persones there holdynge household' and Smale and May therefore paid nothing.

³ *Sx. Rec. Soc.*, IV (1904), p. 124.

⁴ *S.A.C.*, VIII (1856), p. 3.

⁵ See footnote to 1296 Subsidy Roll on p. 69.

⁶ *S.A.C.*, XXVI (1875), p. 268.

⁷ *Sx. Rec. Soc.*, IV (1903), p. 13. Benfields Manor House probably was built before 1603, so there should be two houses, the other being Hangleton Place. It could be that one was unoccupied when the return was made.

⁸ The document is in E. Sx. Cty. Rec. Off., Pelham House, Lewes.

The Hearth Tax of 1662 and 1664¹ shows five houses taxed in Hangleton. They are:

1. Elizabeth Middleton (widow)—13 hearths
2. Thomas Burry (gent) — 5 „
3. Thomas Luxford —11 „
4. Mr. Temple — 4 „
5. Burtenshaw — 2 „

Numbers 1 and 3 probably refer to Hangleton Place and Benfield Place. No. 4 is the house of John Temple, the parson. Aldrington had 3 houses and Portslade 16 houses.

One reference to the 18th century will suffice to show that there was little change in the population. In 1724, five families are recorded as living in the parish of Hangleton, most of them Quakers.² It is not until the 19th century that any improvement is seen.

<i>Population</i> ³	1801	1811	1821	1831
Hangleton	36	48	52	68
Portslade	284	358	421	615
Aldrington	—	—	—	—

The one really important date is 1428 when there were remaining but two householders. The 1340 Nonae Return depicts poverty, which may have been exaggerated to avoid paying more than was necessary, but it may reasonably be inferred that the village economy was then in a period of decline. This is confirmed by the pottery dating. The archaeological evidence suggests that the breakdown was peaceful and there is nothing indicating disastrous fires which would have followed a raid by the French. In an endeavour to find out at what time between 1340 and 1428 the village all but came to an end consideration will be given to the two most likely causes, viz., enclosure for sheep and the Black Death.

Prof. M. Beresford has demonstrated how many Midland villages were depopulated because of the turnover from arable farming to sheep production,⁴ but the difference in soils between that part of England and the South Downs are such that comparison is difficult. The researches of Dr. R. A. Pelham and others have shown that before 1340 downland parishes were contributing to Sussex wool exports. This wool was grown on the natural sheepwalks of South Sussex which for centuries have been the unenclosed downland. This state of affairs, coupled with periodic folding of sheep to manure the arable land persisted until the agricultural revolution that has taken place since 1938. Modern science now permits good crops to be grown and cattle to be maintained on the thin soils of the chalk uplands which previously were better suited to the wandering

¹ Thanks are due to Mr. L. F. Salzman for this information.

² Horsfield, *History and Antiquities of Sussex*, I (1835).

³ *Ibid.*, II, Appendix.

⁴ M. Beresford, *The Lost Villages of England* (1954).

shepherds and their flocks. The coombes, or valleys, with their deeper soil, especially where joining the coastal plain as in the southern part of Hangleton, could profitably be utilised for arable farming and cattle. Hence this may be one of the reasons for the absence of large villages on the higher ranges of the Downs, particularly east of the River Adur where the soil is thinner than that to the west. The 1339 and 1325 P.M. Inquisitions (*supra*) suggest that less than one quarter of the parish was cultivated; the remainder, which was mostly downland, would have been able to maintain several hundred sheep.

The export of Sussex wool certainly improved from a yearly average of 300 sacks during 1350-1400.¹ Remembering that more wool was used at home for cloth making during the latter part of the century (although how much of this was Sussex wool, which was of a poor quality, is not known) it may be that sheep farming was intensified. It is possible that a residual effect of the decline of Hangleton as a village contributed to an increase in its sheep population by making more land available for grass as the arable fields became fewer. There is no positive evidence for this however, rather to the contrary, in that Hangleton (excluding Benfields) paid no tithe on sheep in 1381.² Whether or not there were more sheep in the parish during the second half of the 14th century there does not appear to be a good case for postulating a deliberate change from arable to enclosure for sheep in what was already the natural environment for that animal.³

We must now consider whether the Black Death of 1348-9 could have been a contributory factor to the depopulation of Hangleton. Elsewhere is recorded that the visitation was both severe and widespread in Sussex.⁴ In Wartling the deaths noted in March 1349, were 12 and in the following October over 60. In Appledram in 1349-50 the numbers of the customary reapers were reduced from 234 to 168. These two instances are from opposite ends of the county. Other evidence is given, with calculations, to show

¹ R. A. Pelham, *S.A.C.*, LXXI (1930), p. 174. Cf. *Sx. N. and Q.*, V (1934), pp. 18-19, where it is suggested that while the wealth of Shoreham shipmasters declined between 1296 and 1332, that of the Shoreham wool merchants improved during that time. Dr. Pelham advises caution in accepting statistics from the Subsidies, which injunction is emphasised by L. F. Salzman in 'Early Taxation in Sussex,' *S.A.C.*, XCIX (1961), pt. ii, pp. 1-19.

² In an unpublished thesis, 'The Pastoral Custom and Local Wool Trade of Sussex, 1085-1485,' by Miss A. M. Melville, *Univ. of London Library*, there is the supposition that the number and size of Sussex flocks were in decline in the 15th century. (Summary in *Inst. Hist. Res. Bull.*, X (1932-3), pp. 38-40).

³ A reminder that sheep-rearing must already have been an important occupation on the South Downs in the 11th century is given in *The Domesday Geography of South East England* (1962), p. 439. Patcham, 2½ miles north-east of Hangleton, is recorded in D.B. as having 10 shepherds.

⁴ *V.C.H. Sx.*, II, pp. 180-3. (See also Vol. I, p. 511, where the Black Death and the plagues of 1361 and 1366 are said to have caused nine townships on the sea coast within the Rape of Pevensey to become desolate and uninhabited).

that the population of eight Hundreds before the plague was about 6,700, which by 1440 had been reduced to about 1,500. In Appledram in 1352-3 the cost of extra labour in the harvest fields was 38s. and there was an immediate and lasting rise in the rate of wages.¹

At Wiston in 1345 there were 18 customary tenants, plus one tenement untenanted and in the lord's hands. In 1356 the reeve claims allowance for the works of 8 customers and one thrasher, whose tenements are now in the lord's hands.² Prior to the Black Death there were 8 holdings at Iryngam (Old Erringham, near Shoreham); by 1356, 6 of these are in the lord's hands.³ Local tradition associates the disappearance of Bargham (Upper Barpham, TQ/067089) with the Black Death.⁴

The Court Rolls of Alciston Manor record on 23rd April, 1349, the deaths of 24 tenants of the manor, in Alciston, Lullington and (East) Blatchington. It is made fairly clear that in addition to these heads of families, many members of their families must have perished, for at the next Court in June 1349 it is stated that 16 of the holdings of the deceased tenants were still in the lord's hands 'because no one came after them after the death of the tenants, nor did any one put in a claim for them.' More deaths in other parts of the manor bring the total to 76. The approximate number of the tenants in the time of Edward I was rather over 100, so allowing for some increase in the course of 50-60 years, it would appear that nearly two-thirds of the population were carried off.⁵

A document of 1358⁶ referring to the Priory of Shulbrede (in North-West Sussex) shows that the convent was in a state of distress and its buildings were ruinous. It goes on to illustrate the ravages caused by what must be the Black Death: ' . . . Moreover, the serfs and coloni of the Prior who were useful in carrying out their business have been taken away *in the last wonderful pestilence* which fell on the lands of the Prior, nor can more be got. So that the lands which used to be tilled by them . . . are made waste and lie useless.'

These few examples are enough to show that Sussex was hard hit by the plague and it is improbable that the people of Hangleton escaped its horror and misery. The labour troubles following the Black Death are brought close to Hangleton as 1354 sees Michael de Poynings appointed one of the justices to keep 'the ordinance and statute touching labourers . . . to punish delinquents against the same . . . to hear and determine all infringements of the same.'⁷

¹ *Ibid.*

² *S.A.C.*, LIII (1910), p. 180.

³ *Ibid.*, pp. 164-5, 181.

⁴ *S.A.C.*, XCIX (1961), p. 60.

⁵ *Sx. N. and Q.*, III (1930), pp. 124-5. For further reference to Black Death in Alciston, see *S.A.C.*, C (1962), p. 62.

⁶ *S.A.C.*, XLVII (1904), p. 13.

⁷ *Cal. Pat. Rolls*, 20th June, 1354.

1296 SUBSIDY ROLL FOR FISHERSGATE HALF-HUNDRED

			£	s.	d.				£	s.	d.
Auwis de Grely	2	14	5	¼	Jul' de Benefelde	18	6	½			
Gilibro Sykelfot ¹	2	4	10	½	Rado atte Holte	5	8	¼			
Willmo Lechemere	3	4	½	Henr' de Thornthon ²	15	0					
Stepho Elys	4	0		Ad' Becke	5	10	½				
Rado le May	4	0		Walto Lordewan	6	9	½				
Willmo le Hert	5	6	¾	Rogo Heryng	5	0	½				
Elia Golding	5	9		Thom' le Fohe	7	9	¼				
Godefr' Alwyne	6	0		Willmo Wolfhering	6	5					
Godefr' Prat	8	1	½	Simon' Spendeloue	1	6	¼				
Matild' Relicta Lepere	2	1	½	Regin' Heryng	5	1	½				
Walto le Younghusebunde	4	0		Elia le Cartere	2	1	½				
Rado le Wayte	3	7	¾	Willmo Snylhals	3	9	¼				
Julian' Relicta Hyrdman	1	0	½	Helewysa de Westethun	7	1	¾				
Michaele de Ponyng	3	10	6	½	Willmo le Bouyher'	1	2	¼			
Jordan Faket	4	1	½	Willmo de Plumpton	3	10	½				
Regin' fil Agnet'	5	0	½	Rado Slytbody	4	0					
Willmo le Frens'	5	9	¼	Walto Falet	2	8	¾				
Johanne Thomas	7	5	½	Robre Hond	1	0	½				
Gilibro Wodelonde	1	0	½	Johanne Burdon	2	1	½				
Ricro atte Holte	2	1	½								
				Sma. ..	£17	8	9	½			
<i>Jurati</i>											
Robro Heryng	4	11		Robro Hales	8	4					
Rado de Hangleton	14	9	¼	Simon' a Myddethune ³	1	6	½				
Hugon' le Fohe	2	0	¾								
Warin' de Benefelde	8	5	½	Sma. ..	£2	0	1				
				<i>Sma Tol</i> =	£19	8	10	½			

¹ Gilbert Sykelfot appears as a witness to a Lewes Chartulary document in 1307 (*S.A.C.*, II (1849), p. 16). He also held a messuage and 60 acres of land in Ditchling for the yearly rent of a rose on the nativity of John the Baptist (*Sx. Rec. Soc.*, II (1901), no. 1052, 18 Edward I). In 1296 he holds land in Leycestr'—Hundred of Riston; in Stanmer—Hundred of Lockesfeld; at Southover and at Strete. (*Sx. Rec. Soc.*, X (1909), pp. 33, 38, 51, 52), all in addition to his lands above.

² *Henry de Thornton* of Aldrington, imprisoned in the King's prison of Lewes for the murder of William Carlmot, granted bail 21st September, 1308. (*Cal. Pat. Rolls*).

³ *Simon' a Myddethune*. There is a Middleton Manor between Ditchling and Plumpton, but no evidence that this is the place referred to.

1327 SUBSIDY ROLL FOR FISHERSGATE HALF-HUNDRED

Villat' de Hangleton

	£	s.	d.		£	s.	d.
Marger' de Ponyng ..	17	11		Rado Woluyn ¹ ..	4	11½	
Regino le Zunge ..	3	0½		Johne Thomas ..	2	4½	
Willo Brun.	5	4½		Pho de Hangleton ..	2	7	
Jurdano Falet ..	3	5¼		Johne Spring ..	3	1¼	
Walto Stighelman ..	3	3½		Rico de Hangleton ..	4	1½	
Relicta Phi de Benefelde ..	5	0		Rico le Wayte ..	2	2½	
Willo le Zunge ..	3	3		Edwyna Smothe ..		11½	
Rogo Herdman ..	1	0		Rado le Shephurde ..	2	6¼	
Rico Farndon ..	1	5		Rado Slezbody ..	2	4½	
Johne Plumpton ..	1	7		Simme Slezbody ..	1	8½	
Robto Thom' ..	3	0¼		Willo Cony ..	1	0	
Relicta Willi ate Chapel ..	3	4¼		Relicta Rogeri Waryn ..	1	6	
Gilbto le Reve ..	3	3¼					
				Sma istius villat'	£4	3	6¼

Taxator

Simone de Illegate ..	1	6		Godefrid' de Brembelden	1	6	
				Sma. ..		3	0

Sma tocius di' Hundr' cum tax' = £7 4 0½

Villata de Porteslade

Johne de la Ware ..	13	4		Robto de Hales ..	2	6½	
Hugone Pratt ..	1	2¼		Jacobo Geffray ..	3	2¼	
Rado Asouthetoun ..	6	7		Elia Geffray ..	2	0	
Simone Inthehale ..	2	1		Robto Bury ..	1	6	
Relicta Reginaldi ate Broke	2	5		Johne Sikilfot ..	1	2	8½
				Sma istius villat'	£2	17	6½

1332 SUBSIDY ROLL FOR FISHERSGATE HALF-HUNDRED

Villat' de Hangleton

Thom' de Ponyng ..	16	0		Pho de Hangleton ..	1	8	
Thom' Woluyn ..	2	0		Henr' Dolyne ..		8	
John atte Holte ..	1	0		Willo Wyghteden ..	3	0	
Willo Rykke ..	2	0		John Wyllot ..	1	0	
Johne Thomas ..	1	0		Walto Stighelman ..		8	
Johne Brown ..	2	8		Emma de Benefeld ..	5	0	
Rado le Yong ..	2	0					
				Sma istius villat'	£1	18	8

Taxator

Symone de Illegat ..	1	0		Willo le Woghe ..	1	0	
				Sma. ..		2	0

Sma tocius di' Hundr' cum tax' = £7 12 0

¹ In 1200, a Wolwin, Reeve of Blatchington, involved in law case with Lucy and Adam de Cuckfield, *V.C.H. Sx.*, VII, p. 279.

Villat' de Athelyngeworth

Omnes villani Prioris de Lewes et vacant quia redditus et servicia eorum excedunt taxationem. [All are villeins of the Prior of Lewes and are omitted because their rents and services fall outside taxation.]

Villat' de Porteslhad

	£	s.	d.		£	s.	d.
Pho la Ware	10	0		Johe Wetherhurde	2	0	
Robto de Hales	1	0		Robto le Chuk	1	0	
Jacobo Geffray	2	0		Rico le Theccher	1	0	
Rado a Southetoun	3	0		Pho Robyn	2	0	
Henr' atte Wyke	1	0		Godefro atte Nassh	2	0	
Regin' Aylwyn	1	0		Johne Sikelfout	1	0	0
Robto le Kyng	2	0		Symone atte Hyde	7	0	

Sma istius villat' £2 15 0

Villat' de Aldryngton

Rado Slyghbody*	3	0		Symone Geffray	2	0	
Symone Slyghbody*	3	4		Johe Plumpton*	2	0	
Robto Thom'*	2	8		Symone Broun*	3	0	
Willo Cony'*	1	6		Robto Cutel	1	0	
John le Scras	1	0		Laur' le Tor	4	0	
Rado le Mutel	1	2		Rico de Hangleton*	5	0	
Thom' Russel	1	0		Simone in the Hale	3	0	
Symone Heryng	1	0		Robto Bury	2	0	
Johe Wodelond	3	0		Relca Regin atte Brok	2	0	
Henr' Carter	1	0		Elya Plumpton	2	0	
Reginald' Phelip	3	0		Willo de Sadelescombe	1	0	
Nicho atte Brok	3	0		Johne Spindeloue			8
Rico le Taylleur	3	0		Willo le Swon	1	0	

Sma istius villat' £2 16 4

* On 1327 Roll these are included in Hangleton

1334 SUBSIDY ROLL FOR FISHERSGATE HALF-HUNDRED

This Roll shows only the totals for each manor:

	£	s.	d.
Hangleton	2	18	8
Aldrington	3	3	4
Portslade	3	3	0
Total	£9	5	0

CONCLUSIONS

The archaeological evidence demonstrates that those parts of the village which were excavated (excluding the M.P.B. & W. Area) were in their heyday from c. 1250-1300. There was a small amount of earlier occupation from c. 1250 back to the late-12th century. The quantity of pottery dated to c. 1300-1325 is less than that dated c. 1275-1300. There is a further decrease in the number of sherds between c. 1325 and 1350. Pottery from the second half of the 14th century was scarce, even in Building 5, where occupation, or re-occupation continued until c. 1450. In the absence of accurately dated pottery from this area of Sussex there must be some latitude with respect to these dates. In the M.P.B. & W. area, however, there was more 14th and 15th century pottery and the problem this presents will be discussed in detail in the second report.¹

It is now generally accepted that the 13th century was one of steady progress, that many villages were expanding and utilising more marginal land. Conversely, the 14th century sees a decline in prosperity, among the reasons for which are economic factors, wars, climatic deterioration and plagues. The buildings found by excavation probably represent an expansion of the village of Hangleton during the 13th century, with the emphasis on the period c. 1250-1300. The gradual decline starts early in the 14th century, probably a little before 1325; by 1350 there were few inhabitants and only two householders in 1428. Hangleton thus fits into the picture of a prosperous 13th century and a depressed 14th century.

In the *Historical Discussion* it is submitted that Hangleton was not a casualty because of enclosure for sheep. The gradual depopulation seems to have been brought about by the general conditions of the period. It is probable that the Black Death of 1348 was the culminating blow to an already impoverished village from which it never fully recovered.

THE EXCAVATIONS

There was insufficient evidence in several of the structures to say whether or not they were used for human habitation, to shelter animals or to provide storage accommodation. They have, therefore, been described as 'Buildings' rather than 'Houses.'

BUILDING 1 (FIGS. 4, 5)

The soil covering the solid chalk over and around this site was rarely more than 9ins. thick. Removal of the turf from the flattish mound revealed a profusion of heavy flints interspersed with traces of decayed mortar composed of small beach pebbles, sand and lime. The heaviest concentration of mortar occurred over the lines of the walls, and where the mortar had not disintegrated, there could

¹ S.A.C. forthcoming.

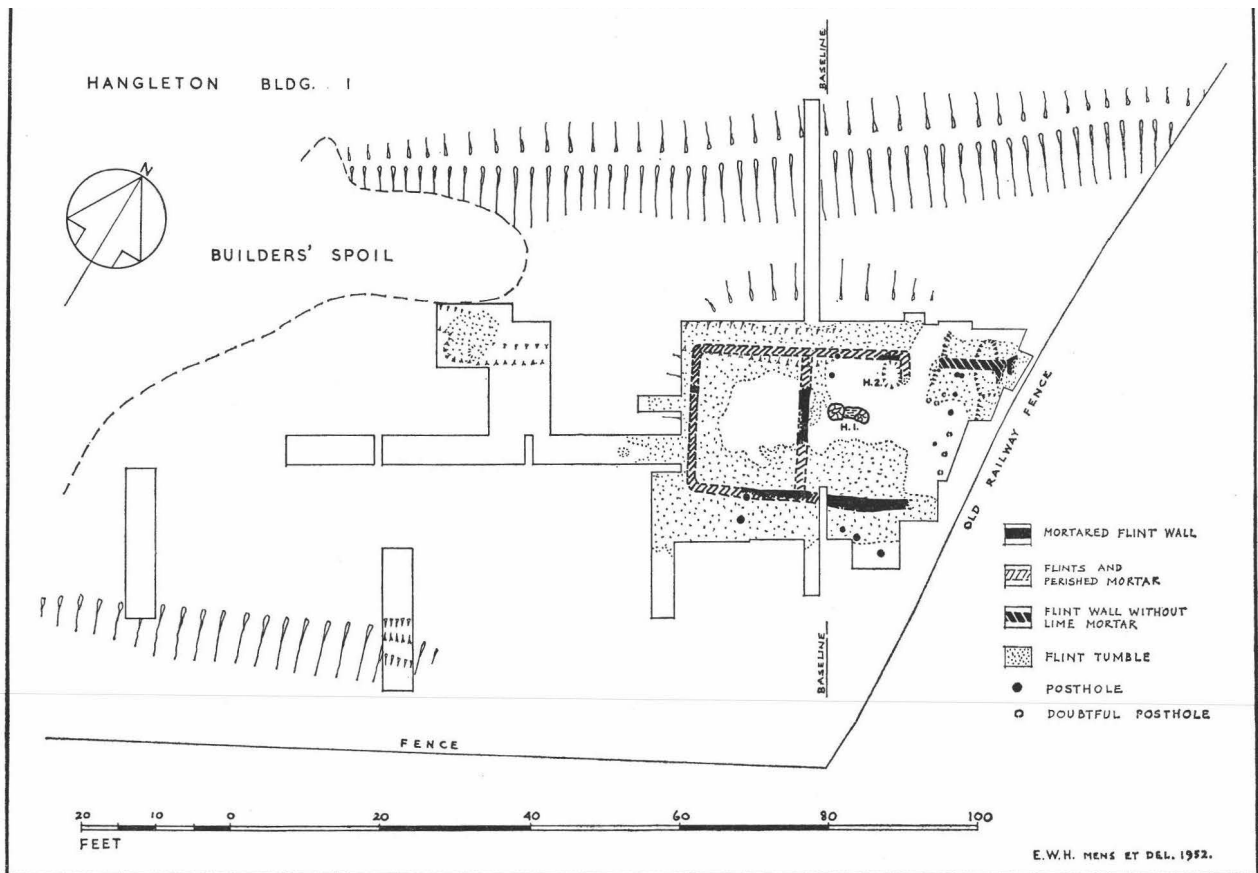


FIG. 5. BUILDING 1: EXCAVATION PLAN (p. 72).

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be traced definite sections of the lower courses of flintwork to a height of 6ins. to 9ins. The internal face of the south-east wall was found easily for a distance of 22ft. A small remaining piece of the south-west wall made it possible to determine the line through the flint tumble. The north-west wall was similarly fragile. There was a tendency for the walls to have rounded corners which would be in keeping with flint construction, for it is well known that square quoins are virtually impossible in random flint walls except with the use of stone or brick at these positions. There are 18th and 19th century examples of flint barns with rounded corners on the Sussex Downs, including one at Benfield Farm, while another stood until recently near Hangleton Manor House.

The building as revealed appeared to have been built in two stages: firstly the chalk had been brought to a roughly level surface and a wall of unknapped flints in mortar erected on at least three sides, giving inside measurements of 27ft. by 18ft. The main part of the building was divided by a cross-wall a little out of centre. This could only have been a dwarf wall as there was insufficient flint tumble to allow it to have been as high as the other walls. A partition of wooden construction would have been erected on the base. Several pieces of re-used dressed stone were laid, without mortar, in this cross-wall. It should be noted that there was no trace of collapsed clay from a wattle and daub partition. There may have been a fourth wall on the north-east side, which was removed when an extension was built in the direction of the railway fence. Traces of flintwork behind Hearth 2 (H.2) might have been vestiges of the earlier north-east wall, but could be merely a backing to give protection to the hearth. There can be no certainty about this fourth wall as there were no foundation trenches to leave their mark and the phenomenon of buildings with one missing wall was noted elsewhere on the village site.¹

The chalk in the doorway behind Hearth 2 was 9ins. higher than the general floor level. This lends weight to the suggestion of an end wall, removed when the building was extended, the hearth being a later feature.

The wall of the extension at the north-east corner was in a much better state of preservation than any of the others in this building, despite it having no lime and pebble mortar. Selected long nodules of flint, some with knapped ends, had been laid in header courses bedded in puddled chalk, leaving an opening 4ft. wide from the corner of the main building. This wall was 9ft. long before it turned at an angle of slightly more than 90 degrees. On one outer face of the corner had been attached a later flint buttress containing mortar pebbles. Both the buttress and the return wall had been wrecked by modern railway fence postholes.

¹ Also noted at the D.M.V. of Wythemail, Northants, excavated by Mrs. D. G. Hurst.

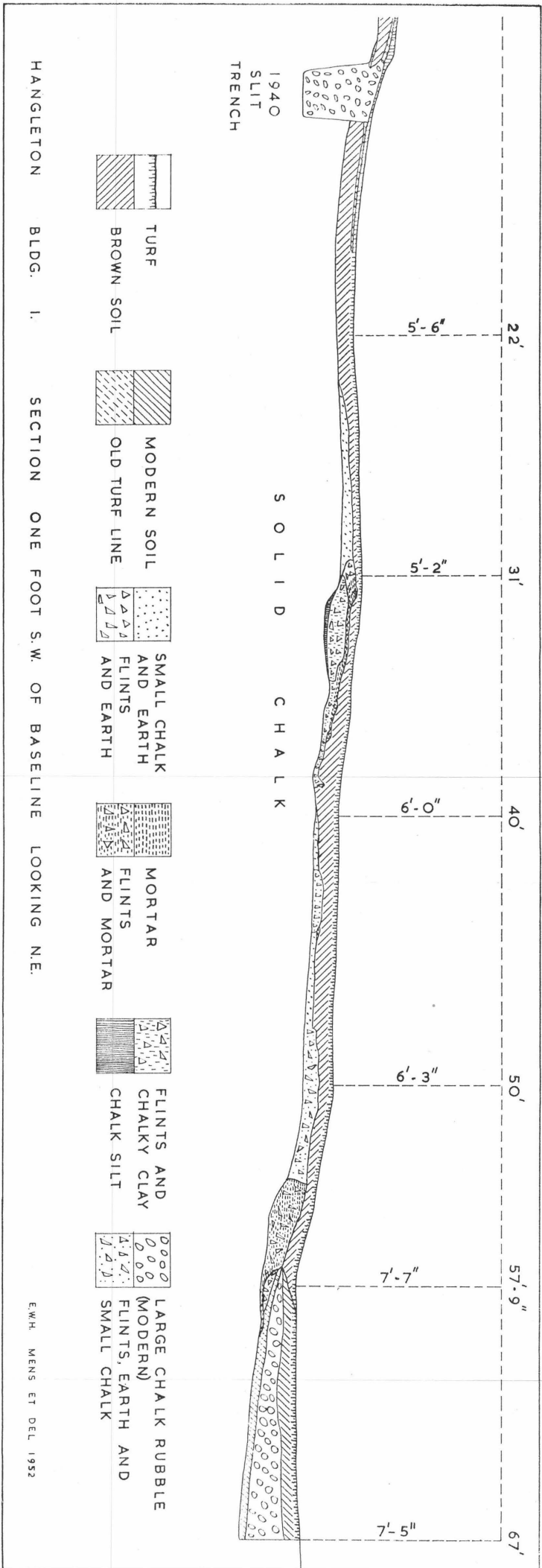


Fig. 4. BUILDING 1: SECTION ACROSS HOUSE FROM N.W. TO S.E.

A reconstruction of the outer walls taken from a typical cross-section of tumbled flints shows that they did not exceed originally a height of from 4ft. to 5ft. There was no greater concentration of flints along the south-west wall to indicate that this end had a flint gable. The average thickness of walls was 16ins. While the medieval builders had made an attempt to level the chalk within the building no effort had been made to form a level bed for the bases of the walls. Parts of the south-east and south-west walls were erected on sloping scarps, requiring some thickening of the south-east wall where the scarp was steeper than usual.

It is unfortunate that nothing was found to give positive information as to the method of roofing the building. A few pieces of clay roofing tiles, glazed ridge tiles, two fragments of slate and pieces of Horsham sandstone (one with a nail or peg hole) were recovered, as were sundry pieces of Roman roofing tile; but had the roof been covered completely with one or other, or a mixture of these materials, and even had the roof been stripped for use elsewhere when the building became uninhabited, there would have been a greater amount of broken tiles or slates left on the site. Sixty nails were scattered in and around the building, but these indicate only that wood was in use and it is more likely that tiles or slates, if utilised, would have been secured by perishable wooden pegs.¹

There were no remains of the roof timbers and no postholes to show that a ridge-piece was supported.² The rafters, therefore, spanning 18ft., would have needed collars to give headroom, rather than tie-beams. The bases of the rafters would rest on wall-plates which in turn would bear on the flint walls. There is no evidence implying the use of framed trusses at intervals.

Of entrances into the building there was one 4ft. wide near the north-east corner, but no trace of postholes to receive doorposts. It is not improbable that there was another doorway in the south-east wall, perhaps between the postholes, as there appears to be no point in bringing fences up to a building in this manner without having an entrance between them. A key (Fig. 36, 11) was found 3ft. inside the building against the east side of the cross-wall. This could have belonged to a door lock, but might equally well have been used for securing a chest. An iron hinge (Fig. 36, 9) found not far from the key, was too light for a door and is of a type suitable for a wooden shutter supported by an iron hook. The western room probably possessed a small unglazed window closed by a shutter, or shutters. The mortared flint wall near the south-east corner petered out where the inward tumble ended. The railway fence excavations had destroyed this corner of the building.

¹ Wooden shingles were another form of roof covering in the 14th century, and ridge tiles (*crestes*) are mentioned. Cf. 'Rolls of the Manor of Wiston,' by Rev. W. Hudson, *S.A.C.*, LIV (1911), p. 153.

² Judging from the evidence of the earliest existing roofs in Sussex, there would be no ridgepole.

The ending of the mortared wall at this point suggests another doorway or opening having been left when the extension was erected.

A line of post and stake holes, of which three shallow holes were doubtful, ran across the floor from the north-east extension wall towards the south-east wall. The first was a well-made double posthole 10ins. deep. All were filled with earth and small chalk rubble and one contained a single sherd of coarse pottery. These postholes could have held upright timbers forming the main supports for a partition screening the north-east end of the building from the remainder. There was no evidence to prove that these postholes were made at the same time, or after, the erection of the extension, but it was noticeable that less pottery than usual was found between the line of holes and the end wall suggesting that this section had not been used for domestic purposes. It could have been utilised for storage, or as a byre or pen for animals.

Two more postholes were found between Hearth 2 and the cross-wall, one under the assumed line of the main wall. These were well formed, 10ins. and 12ins. deep respectively, without any objects in the filling of earth, small chalk rubble and small flints. Their purpose cannot be explained and as one was under the wall they may have some connection with the earlier depression described later. A small stakehole, 5ins. deep, was in the north-east corner and another, doubtful hole, 3ins. deep, by the west end of the extension wall.

Several large and deep postholes lay outside the south-east wall one being partially under it. One posthole contained, besides oyster shells and mortar pebbles, a fragment of late-13th century pottery with a combed decoration (Fig. 27, 239), similar to another sherd found within the building; thus they are not earlier than the building and are probably coeval. These holes were the last remains of palisades or fences which turned in towards the house similar to those joining Building 8; but in this instance they were more substantial.

The central portion of the building contained remains of two hearths (H.1 and H.2, Fig. 5). Hearth 1 was formed by an irregular hollow in the chalk floor, showing signs of heat, in which had been bedded about one dozen broken clay roofing tiles set at an angle, with the edges of the tiles uppermost. Flanking these tiles on the east was a layer of flints about 2ft. in diameter, while a mixture of flints, sandstone, clay tile fragments and a large piece of Mayen lava quern were on the opposite side, covering an area slightly larger than the flints. The roofing tile section and the group of mixed stones on the west side all bore traces of fire. A few fragments of charcoal and some nails were found here. Hearth 2 showed first as a patch of dark earth which, when cleared, was found to be an oval cutting in the solid chalk, roughly 4ft. long, 2½ft. wide and 6ins. deep, with sloping sides. Mixed with the earth and small chalk rubble filling were several large walling flints, pieces of clay roofing

tiles and green glazed ridge tiles; also one fragment of oven, or hearth tile.

The flint tumble between Hearth 1 and the south-east wall contained several pieces of tooled and rough stone, all fire-marked, and broken pieces of several oven tiles. The masonry was waste or demolished stonework from a substantial building re-used to form a hearth, fireback, or other feature of a cooking place. These stones, with the oven tiles, suggested another small hearth or oven close to the outer wall, but so jumbled were the various fragments, it would appear that this feature had deliberately been destroyed when the wall was crumbling, or they could have been removed from Hearth 1 at a similar time. The hearth, or oven, tiles, which are fully described later were not, at first, recognised as such. These tiles have round or square stab holes on the underside almost penetrating the full thickness of the tile, but as the top surface had flaked off due to burning, the tiles appeared to be perforated.

That Building 1 had been used as a habitation is confirmed by the hearths, the small finds and the large amount of domestic pottery sherds recovered, dated mainly to late-13th and early-14th centuries. The finds included many oyster shells, with a cache of several hundred just outside the north-west corner, charcoal, iron knife blades, pieces of a bronze cauldron, a glass linen smoother and two bone beads. Animal bones were plentiful, including those of sheep, pig and ox. The jaw of a black rat, and a dog's jaw were found inside the building. Two large pieces of Mayen lava quern stones, twelve small pieces of sandstone querns and about one third of a shelly limestone top stone of a pot-quern were recovered. Almost every piece of quern bore traces of fire, indicating that they had been put to useful purpose after breaking by being placed in or around hearths. Flint would not normally be used in hearths as it splinters and disintegrates very rapidly when burnt, therefore the medieval inhabitants would use every available piece of stone, other than flint, for their fireplaces. As the tumbled flints or bases of walls showed no fire marks, the building had not been burnt down.

Agricultural pursuits were represented by a figure-of-eight iron loop with a shackle at one end, which could be from a draught chain (Fig. 37, 1). A swivel ring, and two small iron rings probably came from harness (Fig. 37, 3, 5). Fragments of lead and a disc-shaped piece of lead, about the size of a thick penny, were among the small finds (Fig. 38, 20-22, 24). A Roman coin was underneath the tumble of the south-west wall. Roman coins are found occasionally in this neighbourhood for there was a Roman villa at West Blatchington, less than half a mile to the south-east. This particular coin must have been found in medieval times and dropped inside the building.

It is remarkable that the final phase of Building 1, but for minor features, is almost identical in size, layout and orientation with

House 1 at Beere, Devon.¹ In the latter, the byre occupied the eastern end, then occurs a cross-passage between doors in the north and south walls; there is a central room with a hearth in the middle of the floor and a separate room at the western end. The authors of the Beere report point out that this arrangement is typical of a 'long-house'—'men and animals under one roof-line, cross-or feeding-passage with byre to one side and human habitation with central open hearth on the other.' With the exception of the division of the living space it has affinities with medieval upland farmsteads in Wales.²

The western room at Beere had little pottery and showed less signs of occupation, from which was inferred that this room had been used mainly for sleeping. The same cannot be said with such confidence of the corresponding room at Hangleton. Although there was less pottery than in the central part of the house and no oven tile, most of the ironwork, some pieces of quern, the linen-smoother, beads, some animal bones and a few oyster shells were on the floor of our western room. It is, however, most likely that the sleeping quarters were at this end of the building, but not to the exclusion of the room being used for other purposes by day.

During the tracing of the north-west wall, an earlier shallow round-bottomed ditch 5ft. wide and 1ft. deep was found partly under and outside the wall, from the silt of which came a few pottery sherds, probably 1200-1250 in date. Trial cuttings in the area available for exploration to the south-west produced no evidence of other medieval buildings, but there were scattered sherds, a spindle-whorl and oyster shells. One of them located a break in the earlier ditch where there was a scatter of flints. The silting of the shallow ditch below the topsoil was composed of earth, small chalk rubble and a few flints, which, when removed, gave up three oyster shells, two teeth and a few coarse sherds, including a round-section jug handle with oval stab-holes (Fig. 24, 201). The dating of this handle to the early-13th century agrees with sherds found in the silt under the north-west wall of Building 1 and is useful in limiting the earliest possible date for the building. Another of these cuttings revealed the edge of Track 1 parallel to the modern fence.

BUILDING 2 (FIG. 6)

Rapid excavation revealed remains of three walls and traces of a fourth. Sections of other walls were seen in the edge of the railway cutting. The walls were standing to a height of 9ins. and had not been laid with lime mortar, the filling between the flints being of earth and fine chalk. Rather more than half of the floor had been slightly hollowed, the central portion showing signs of burning. The face of some flintwork in the south-west wall was burnt, giving

¹ 'Excavation of a Medieval Settlement at Beere, North Tawton, Devon,' by E. M. Jope and R. I. Threlfall, *Med. Arch.*, II (1958), pp. 112-140.

² *Ibid.*, p. 122, and see footnote 31 for Welsh references.

further evidence of fires against this wall. While the south-west wall was 18ins. in thickness, the opposite wall varied between 7ins. and 12ins. having been built off a ledge cut into the chalk. The north-west wall had a 2ft. wide opening next to the thin flint wall, probably a doorway to another part of the building. The size of the mound, much of which had been lost during the construction of

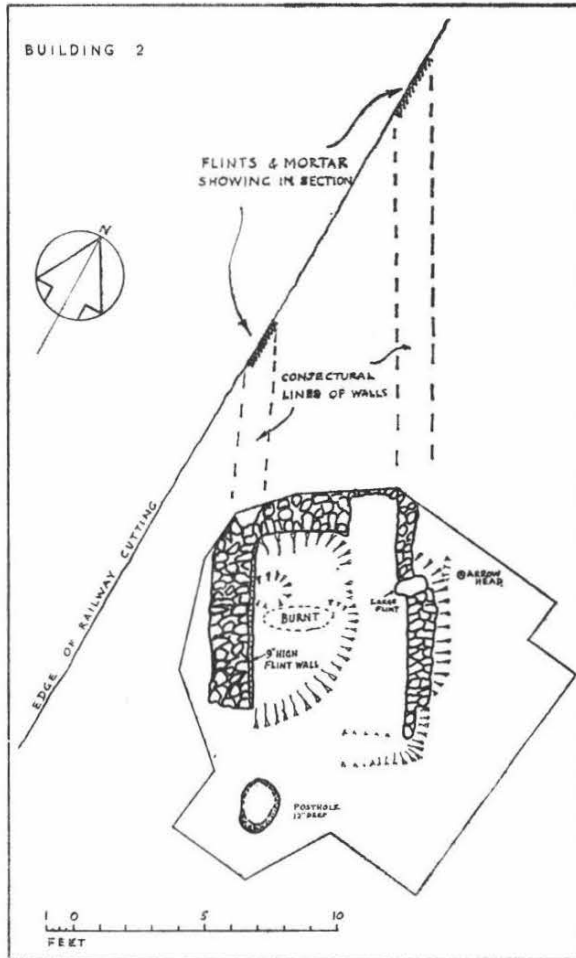


FIG. 6.
BUILDING 2: EXCAVATION PLAN
(p. 78).

the railway, suggested a building, not larger and probably smaller than Building 1. The portion uncovered was possibly a corner of the main building, though the slenderness of one wall may mean that it was a lean-to addition.

Besides a few medieval sherds, oysters and a fragment of oven or hearth tile, the most interesting find here was a barbed iron hunting arrowhead (Fig. 37, 11) found just outside the north-east wall.

BUILDING 4 (FIG. 7)

The cutting of a new road by a mechanical excavator showed in section a scarp in the solid chalk with dark soil filling over a layer of fine mortar. Excavation soon revealed traces of the corner of a building, but it was obvious that the greater part had been obliterated by the new road. The gently sloping natural chalk had been cut into over the east side for a depth of 2ft. leaving a flat platform 8ft. wide. The chalk had then been further dug away for 6ins. to form

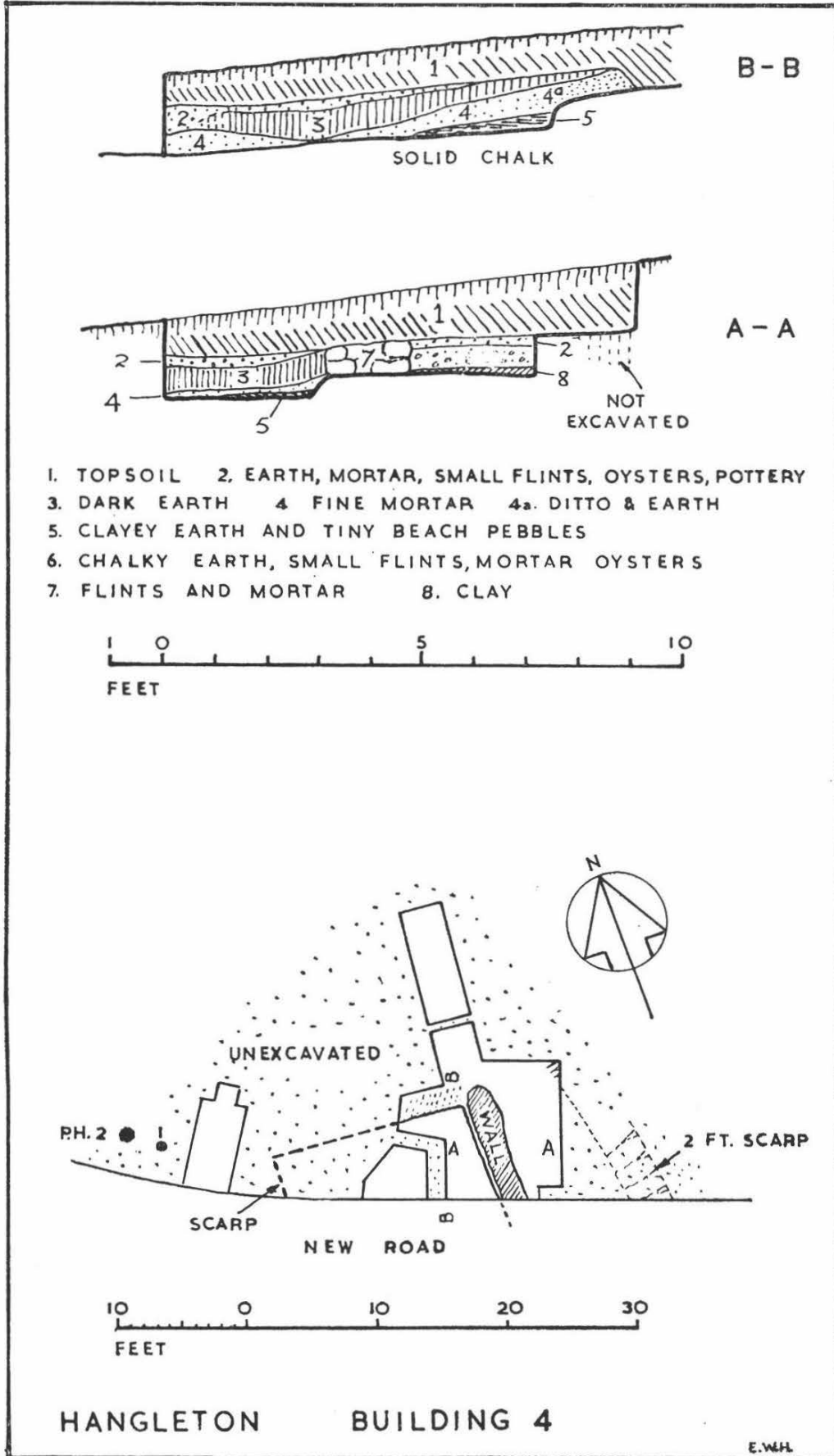


FIG. 7. BUILDING 4: PLAN AND SECTIONS (p. 79).

the floor inside the building, which continued for 15ft., and a similar vertical scarp marked the western limit. Midway between the scarps was a swelling in the chalk, the floor being 6ins. lower on the western side. The bottom two or three courses of flints and mortar were all that remained of the east wall, the north and west walls being entirely missing. The earth between the east wall and the 2ft. high scarp contained some tumbled flints, mortar, late-13th and early-14th century sherds including two with applied finger-impressed bands, a piece of oven tile, oyster shells, common snail shells, animal bones, nails, two pieces of Mayen lava and a small block of axed masonry. Inside the building, below topsoil, was a thin layer of earth similar to that outside the wall containing like sherds, mortar pebbles, oysters and one fragment of slate. The next layer, 5ins. thick, of dark soil intermixed with fine sea sand was practically barren of pottery or other finds. Below this came a layer of very fine mortar of uneven thickness which was for the most part on the chalk floor, except for a thin bed of chalky clay close to the north and east walls. Two green glazed sherds and fragments of charcoal were on the solid close to the north-east corner.

Whereas the mortar between the flints in the remaining piece of wall was of the usual kind, i.e. lime mixed with sand and beach pebbles up to the size of a small pea, the layer of mortar within the building had no beach pebbles, but was of a very fine consistency suggesting that it was collapsed plaster from the walls. This receives support from traces of solid rendering on the vertical faces of the 6ins. scarp on either side of the north-east corner.

The scarcity of finds in the dark soil layer leads to the supposition that, after the first occupation or use of the building, there was a period of decay when the rendering fell from the flint walls, hastened perhaps by a roofless condition, to be followed by use of the shell of the building by cattle or other animals. The finding of the usual household refuse outside the east wall, and the rendering within, indicates the possibility of the building having been used originally for human habitation.

The excavation of a water-main trench parallel to the edge of the new road cut through two postholes a few yards west of Building 4. P.H.1 had a bottom diameter of 6ins. and was 12ins. deep into the solid chalk, while P.H.2 was 11ins. diameter and 24ins. deep. Both holes were filled with earth and small chalk rubble mixed with traces of beach pebble mortar. P.H.2 yielded also some pottery sherds, charcoal, two nails and a winkle shell. One of the sherds was of 17th century date; thus these postholes were later than the nearby building, their purpose being obscure.

BUILDING 5 (PL. 3, FIG. 8)

The excavation of a low, irregular mound was abruptly terminated by building operations, with the consequence that complete details of the structure were not revealed. Tumbled flints and mortar on

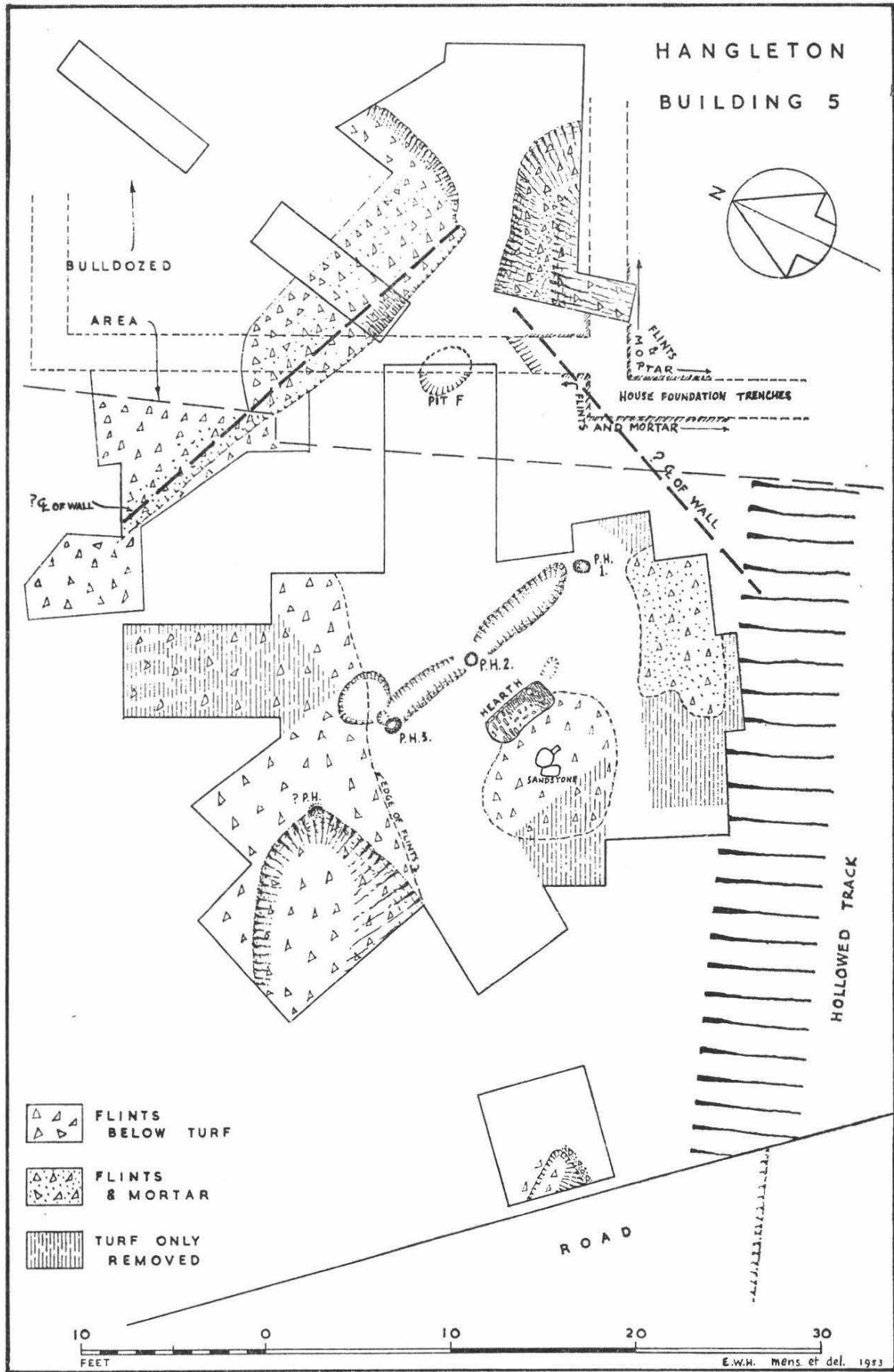


FIG. 8. BUILDING 5: PLAN OF PARTIAL EXCAVATION (p. 81).

the north side showed that a wall had stood along the line of a chalk scarp, but it was not certain whether it formed an external wall of a building or had been a low wall enclosing a yard or open space. Traces of flints and mortar at right-angles to the north wall were exposed by sections in modern foundation trenches along the eastern side. No wall came to light on the western side, though the spread of flints indicated that a wall in this position was a probability. A line of three small postholes about 6ins. in diameter and 12ins. deep had been cut into the solid chalk, parallel to and about 18ft. south of the supposed direction of the north wall. These holes were connected by shallow depressions 18ins. wide and 6ins. deep. A fourth possible trace of a cutting into the chalk to receive the base of a small post was roughly in line with the others 6ft. west of P.H.3. If it is assumed that P.H.2 is in the approximate centre of the building and that another flint wall would be found 18ft. south and parallel to the north wall, the building would have measured 36ft. by 25ft. Even the smaller dimension would seem to be too great a span for a humble dwelling, for the roof timbers would need to be long and of substantial scantling requiring stout walls to withstand the thrust put upon them. The ancient hollow track on the south-east side would, however, have limited the position of a south wall to not more than 15ft. away from the posthole line. No wall was discovered at this point owing to the ground being wrecked by mechanical excavators before cuttings had proceeded thus far. The possibility of the building having been reconstructed at some time cannot be dismissed and a longer occupation than elsewhere is confirmed by the small quantity of late-14th and 15th century pottery found in addition to late-13th and 14th century sherds. The scanty evidence from this excavation suggests, in its final phase, a building about 25ft. by 15ft., consisting of flint and mortar walls on the south, east and west sides, post construction on the other with an open yard to the north surrounded by low flint walls having an entrance in the north-east corner.

South of P.H.2 was a hearth, 4ft. long by 1ft. 9ins. wide, formed of thin pieces of Wealden sandstone set at an angle, on edge, surrounded by pieces of tabular flint (PL. 3). The south side was much worn away through continual use, the upper edges of the sandstone being blackened by fire and charcoal. Two flat pieces of sandstone near the hearth may have formed another small hearth or hob, while scattered flints, many of which were burnt, may represent the remains of some kind of screen wall or fireback.

Besides the ubiquitous fragments of Mayen lava, small pieces of oven tile with round stab holes, oyster shells, nails, animal bones and pottery sherds similar to those found in Building 1, were several other finds of more than usual interest. P.H.1 contained a corroded tanged iron knife, a schist whetstone, a nail and some mortar fragments. P.H.2 had a piece of scallop shell, small pieces of bone, a small lump of ironstone, also a tiny piece of mussel shell, an ox

shoe (the same as another found on the solid), one sherd with an internal speckle of yellow glaze, four fragments of bone, and several pieces of sandstone used for packing. Adjoining P.H.3 on the north side was a 9ins. deep pear-shaped sinking in the chalk, having steep sides, which was filled with small chalk rubble and earth barren of finds. Above this filling and under the tumbled flints was a jug handle, bone and shell fragments. The shallow depressions between the postholes were filled with small chalk rubble and earth from which came, in addition to the later pottery, late-13th and 14th century sherds, some bearing traces of white slip and green glaze; oyster and other shells, nails, two tiny pieces of oven tile, a little charcoal, several lumps of ironstone (found locally in the county), bone fragments, a piece of masonry, two schist whetstones, several broken roofing slates and two whole slates. Other small objects found in the vicinity of the postholes and hearth included two iron knife blades, a silver penny, a bronze belt chape and strap end, and a bronze sword pommel. The bronze articles fit into a late-14th and 15th century context. The silver penny is so worn that its date is uncertain. The fabric suggests that it was struck between 1344 and 1412.¹ With 50-100 years' wear the date of its being dropped is a matter for speculation, but the coin is not necessarily incompatible with the 15th century finds.

The chalk shelved away at the south-west corner of the cutting outside the probable line of the west wall and further confirmation that the building had been used as a dwelling was shown by the quantity of mussel and oyster shells in addition to a few broken ox and pig bones (one had been sawn) which had there been deposited. A few late-13th and early-14th century sherds, one late-14th century sherd, Mayen lava, and oven tile fragments, also several pieces of ripple-marked Wealden sandstone, about 12ins. by 8ins. in size, nails and a piece of slate were mixed with the earth and chalk rubble filling of the depression.

When house foundation trenches came to be dug a small pit with sloping sides, about 30ins. diameter and 18ins. deep was cut through near the north-east corner of the supposed open yard. (Pit F Fig. 8). This was the only example of clay having been used to form a waterproof lining, as the pit had the walls and base covered to a thickness of 2ins. with stiff brown clay of the kind readily available a short distance away on the top of the hill from the clay-with-flints deposit. The filling of the pit was unstratified, consisting of chalky earth and small flints. Near the bottom of the pit were the broken remains of part of two large early-13th century cooking pots. While the exact meaning of the pit cannot be ascertained, it would have held water, or, if suitably covered, could have been used for storage of some kind.

¹ Thanks are due to Mr. R. H. M. Dolley for his opinion regarding this coin. I am grateful also to Mr. H. T. Brazenor and Mr. S. E. Rigold for their advice on this and other coins.

Elsewhere in this paper it is noted that Roger Smale and Robert May were the only remaining householders in 1428. As this building contained 15th century remains it is possible that one of them lived here.

BUILDING 3 (PL. 1, FIGS. 9-11)

The natural slope of a fold in the chalk had here been excavated by the medieval builders to a maximum depth of 3ft., forming a level floor for a flint building measuring 21ft. 6ins. by 13ft. internally. After the structure had fallen into ruins, nature and the centuries combined to cover the remains with an average thickness of 9ins. of soil, on top of which was deposited 12ins. of small chalk rubble

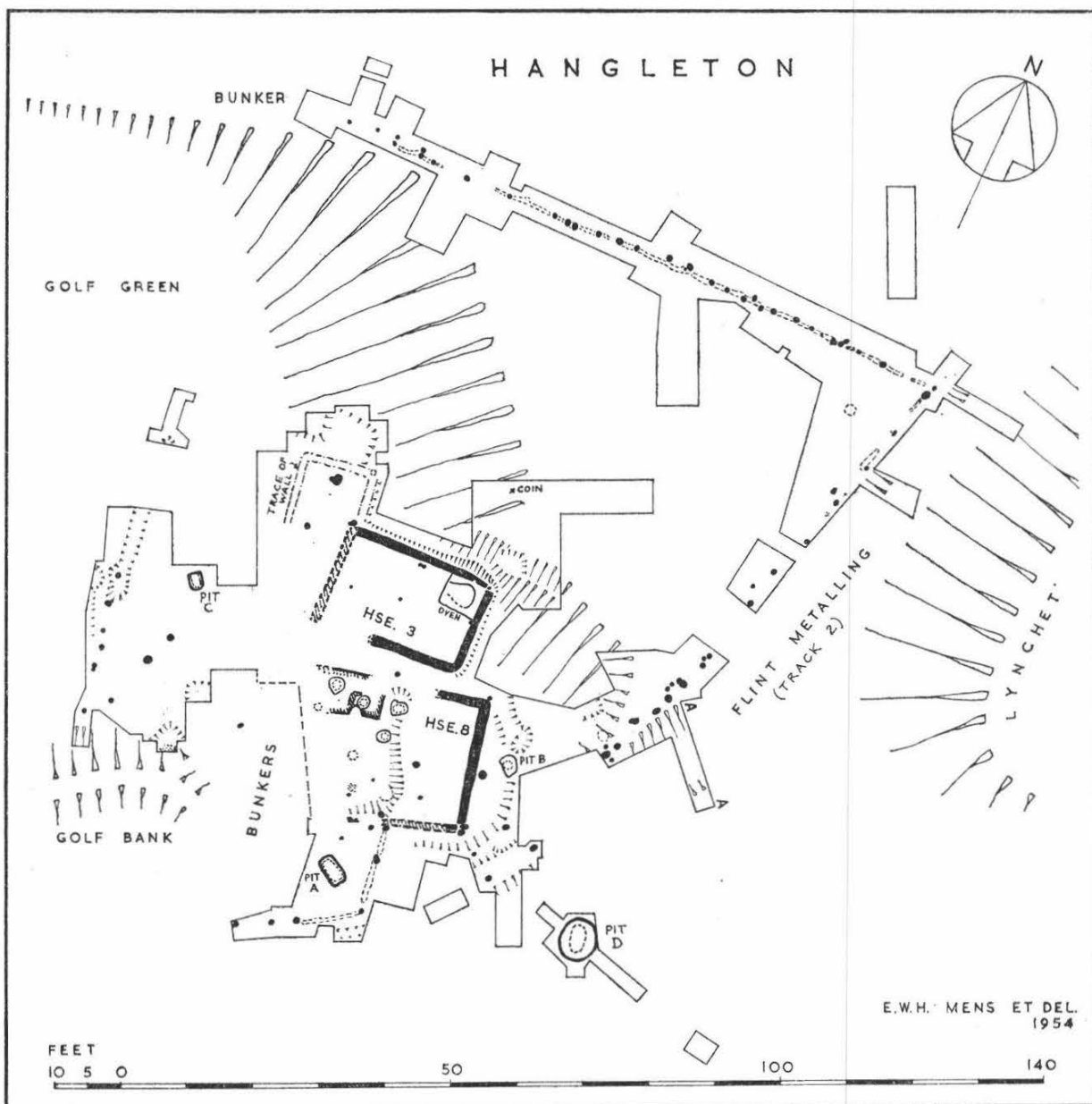


FIG. 9. EXCAVATION PLAN OF BUILDINGS 3, 8 AND NEARBY FEATURES.

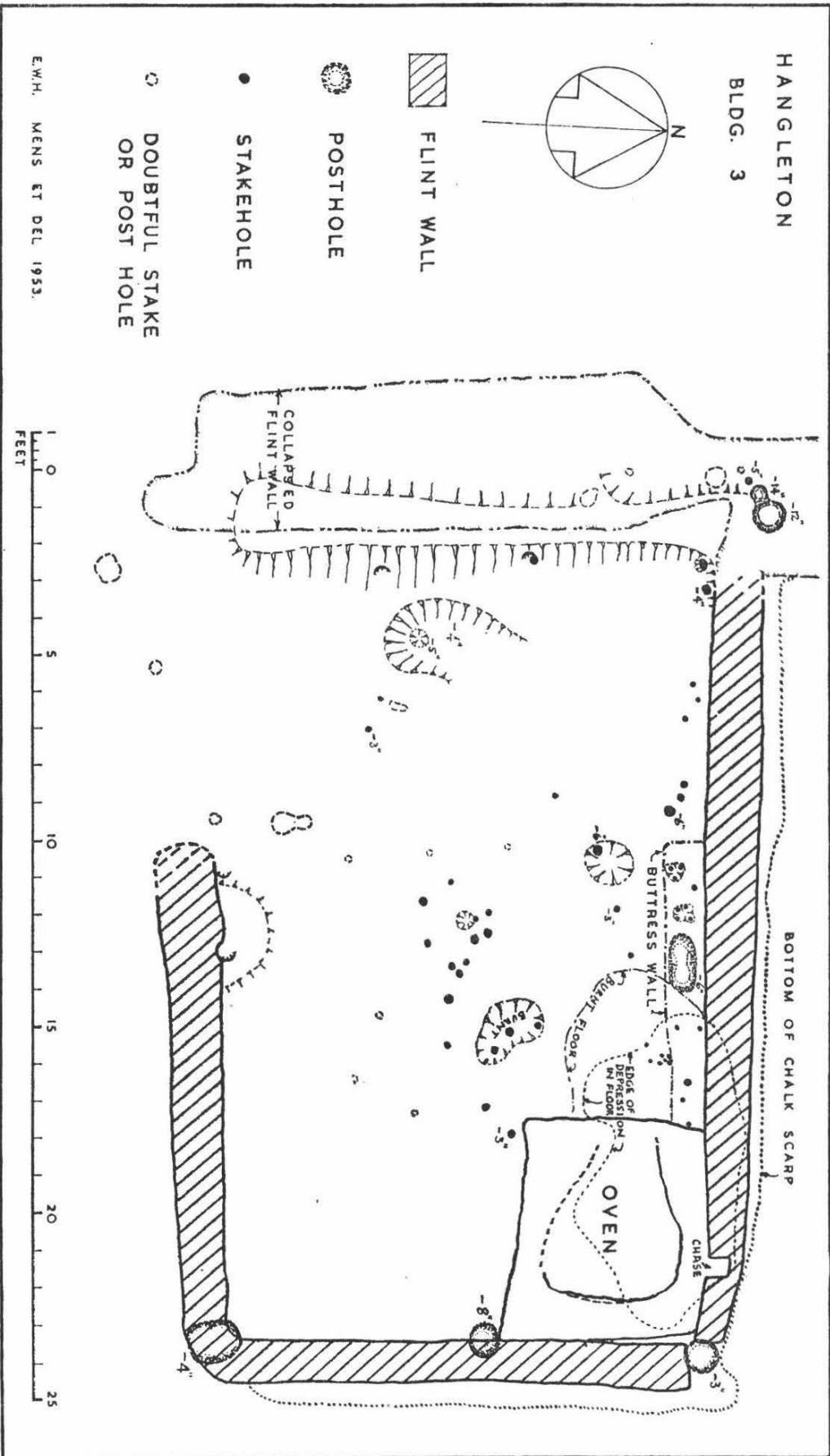


FIG. 10. BUILDING 3: PLAN (p. 85).

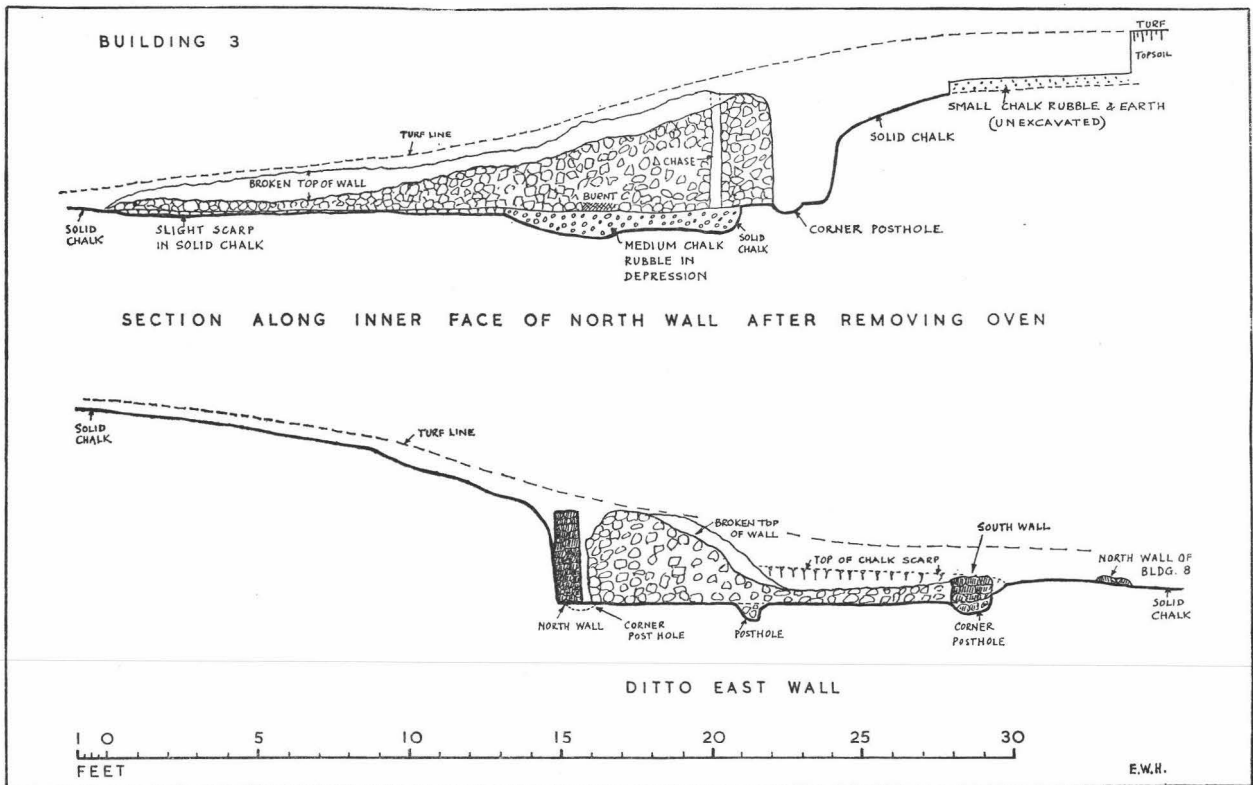


FIG. 11. BUILDING 3: ELEVATIONS OF INTERNAL FACES OF NORTH AND EAST WALLS.

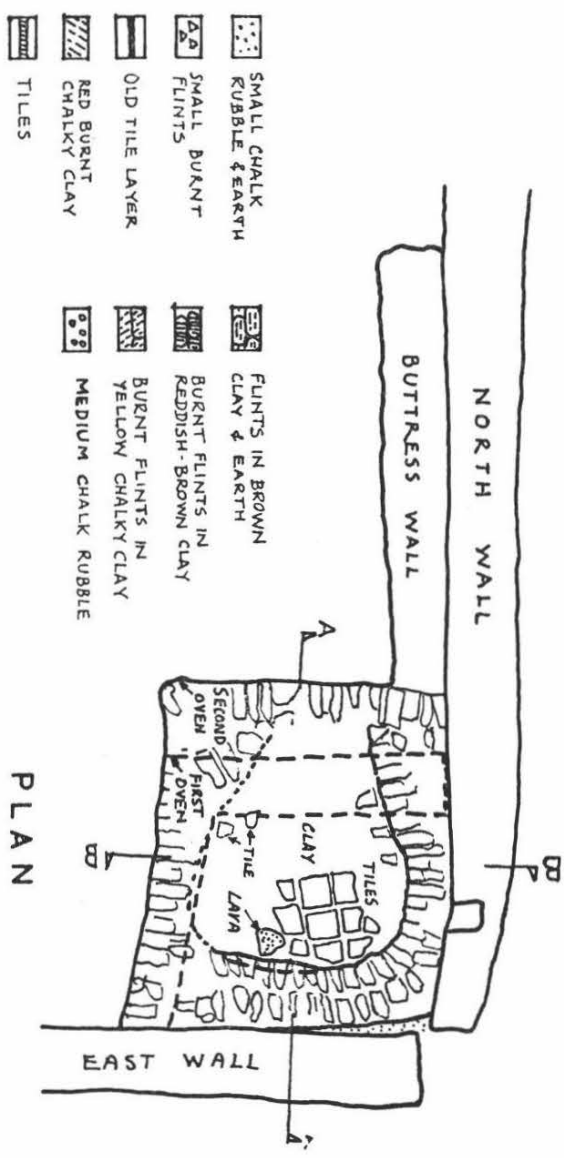
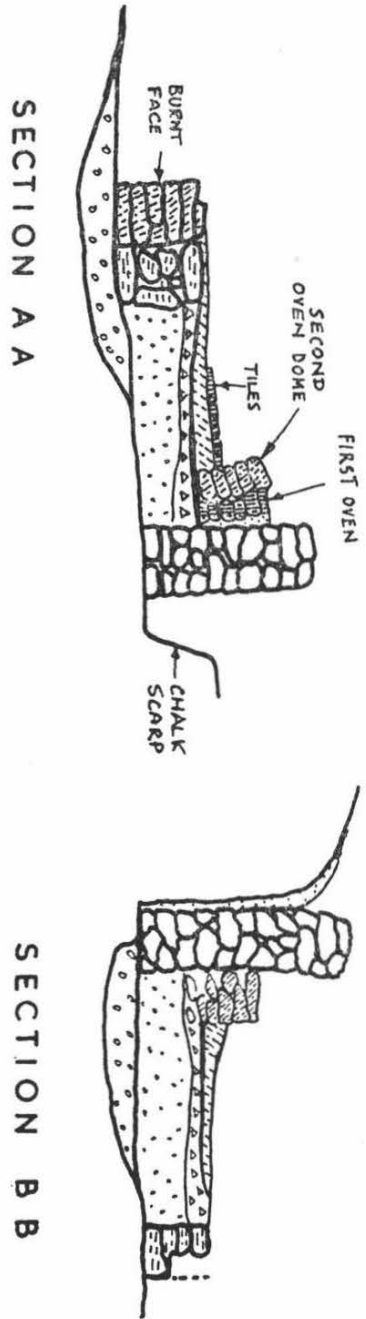
at the time of the construction of the golf green. The rapid silting on the sloping site protected part of the flint walls which were 3ft. 9in. high at the north-east corner. The north wall was hard against an almost vertical chalk scarp, while the east wall was 12ins. away from a lower sloping scarp. There was a gap of 8ft. at the west end of the south wall where the entrance could have been, but there were no doorpost holes. The walls varied in thickness from 13ins. to 17ins. The flints had been laid at random in puddled chalk which was still very firm where the walls were high. They appeared at first to be bedded only with earth and small chalk, but demolition of the north wall demonstrated how the upper 12ins. of the puddled chalk had been washed away, no doubt accelerated by the activities of earthworms, to be substituted by earth and small chalk rubble. The south wall, being only 12ins. high, had lost all its original puddled chalk bedding material.

The north and east walls did not quite meet at the corner, there being a 3ins. gap between the inner faces. From the fair face to the flints at the ends of these walls, considered in conjunction with an 11ins. diameter by 3ins. deep depression in the chalk, it may be inferred that a timber post stood in this corner. Having found the space occupied by one post, it was to be expected that others would be discovered at the remaining corners and perhaps at intermediate points along the walls. Half of an 8ins. deep posthole was traced midway along the inner face of the east wall and a slight shelving inside the south-east corner gave hopes of another. At the conclusion of the excavation the walls were removed, the other half of the east wall central posthole being found, while the south-east corner covered a shallow depression. The flintwork above these two holes appeared to be homogeneous with that adjoining, but as the puddled chalk bedding had been lost, and the wall was low, it is possible that flints had fallen into the spaces left by the decayed posts. Alternatively, the central and south-east posts may have rotted away at their bases, which were cut away and underpinned with flints. There were no corresponding postholes along the lines of the other walls. A 12ins. deep hole just outside the line of the north wall at the north-west angle might have been part of the main building, but it could have some connection with the small structure adjacent to the corner. The small double posthole, 9ins. deep, near the centre of the north wall is 16ins. out of alignment with the north-west and north-east corner postholes. Though our forebears may not have been pre-occupied with ensuring that walls were straight, the evidence here in the flintwork, as elsewhere, shows that reasonably straight walls could be achieved. The double posthole may, therefore, be part of an original post building, but it could represent a later support to the roof timbers. Numerous small stakeholes, 1½ins. to 4ins. in diameter and between 2ins. and 6ins. deep, were along the inside line of the north wall, while the west and south walls each had two shallow scoops for the bases of small posts.

A clue to the building sequence was obtained after the demolition of the oven. A chase in the north wall, near the north-east corner, was cleared of loose flints and this showed where the flint wall had been built around a small post. This chase was 6ins. deep and 5ins. wide at floor level, but only 3ins. wide 3ft. above the floor. The post, therefore, was not very substantial and there was no definite posthole. Careful examination before pulling down the walls showed that this was the only chase, although there was slight evidence in the south wall that at one point the flints had been built behind an existing post. The north-east and south-east corner postholes were no more than depressions in the chalk, 3ins. and 4ins. deep respectively. The floor within the walls was on an average 9ins. lower than the scarp to the east and south, and 6ins. below the chalk swelling delineating the base of west wall. It may be that deeper holes were dug for posts when the bedrock was higher, and the first timber-framed structure could have been smaller than the final building. Subsequently, the floor may have been excavated to a lower level, to the extent of the building as discovered, leaving the shallow depressions of some posthole bases, while others were entirely removed. Flint walls were then built, retaining the north-east corner post and the small post 2ft. to the west, while the other posts in the east wall either were removed or underpinned. The first oven followed the building of the flint walls. The oven later was rebuilt and the base of the north wall strengthened.

The Oven (Pl. 2, Fig. 12). Clearance of a large number of calcined flints and chalky clay from a mound within the north-east corner exposed firmly bedded long flints forming the outer walls of the base of an oven occupying a space 6ft. by 5ft. and 1½ft. high. The few tiles remaining on the oven floor were blackened by fire and the lower courses of flints surrounding the tiles followed a pear-shaped plan. Sufficient corbelling of the flints at the east end showed that the casing of the oven had been a flint dome with the opening on the west side. These flints were all selected nodules, laid header fashion, the inner ends of which were reddened by heat. The outer face of the dome had been covered with chalky clay or puddled chalk, and there were some traces inside to show that the inner surface had similarly been plastered. Several pieces of dressed masonry, a piece of Mayen lava and some Wealden sandstone lying on the floor close to the west wall of the oven and all fire marked may have come from around the opening to the dome. Beside a few tiles in situ there were fragments of broken tiles lying on the clay bed; also part of an ox jaw, a pig tusk, fragments of two knives, a nail and two sherds. The tiles were about 6½ins. square with square stab-holes below (Fig. 30, 2). A piece of Mayen lava was found bedded adjacent, having been used in lieu of a tile. The outer face of the west wall of the oven was splintered by heat, caused presumably by hot ashes withdrawn from the oven chamber. The chalk of the house floor was blackened and burnt for a distance of 4ft. from the oven opening.

BUILDING 3 OVEN



- | | | | |
|--|----------------------------|--|------------------------------------|
| | SMALL CHALK RUBBLE & EARTH | | FLINTS IN BROWN CLAY & EARTH |
| | SMALL BURNT FLINTS | | BURNT FLINTS IN REDDISH-BROWN CLAY |
| | OLD TILE LAYER | | BURNT FLINTS IN YELLOW CHALKY CLAY |
| | RED BURNT CHALKY CLAY | | MEDIUM CHALK RUBBLE |
| | TILES | | |



E.W.H. 1933

FIG. 12. BUILDING 3: PLAN AND SECTIONS OF OVEN (p. 89).

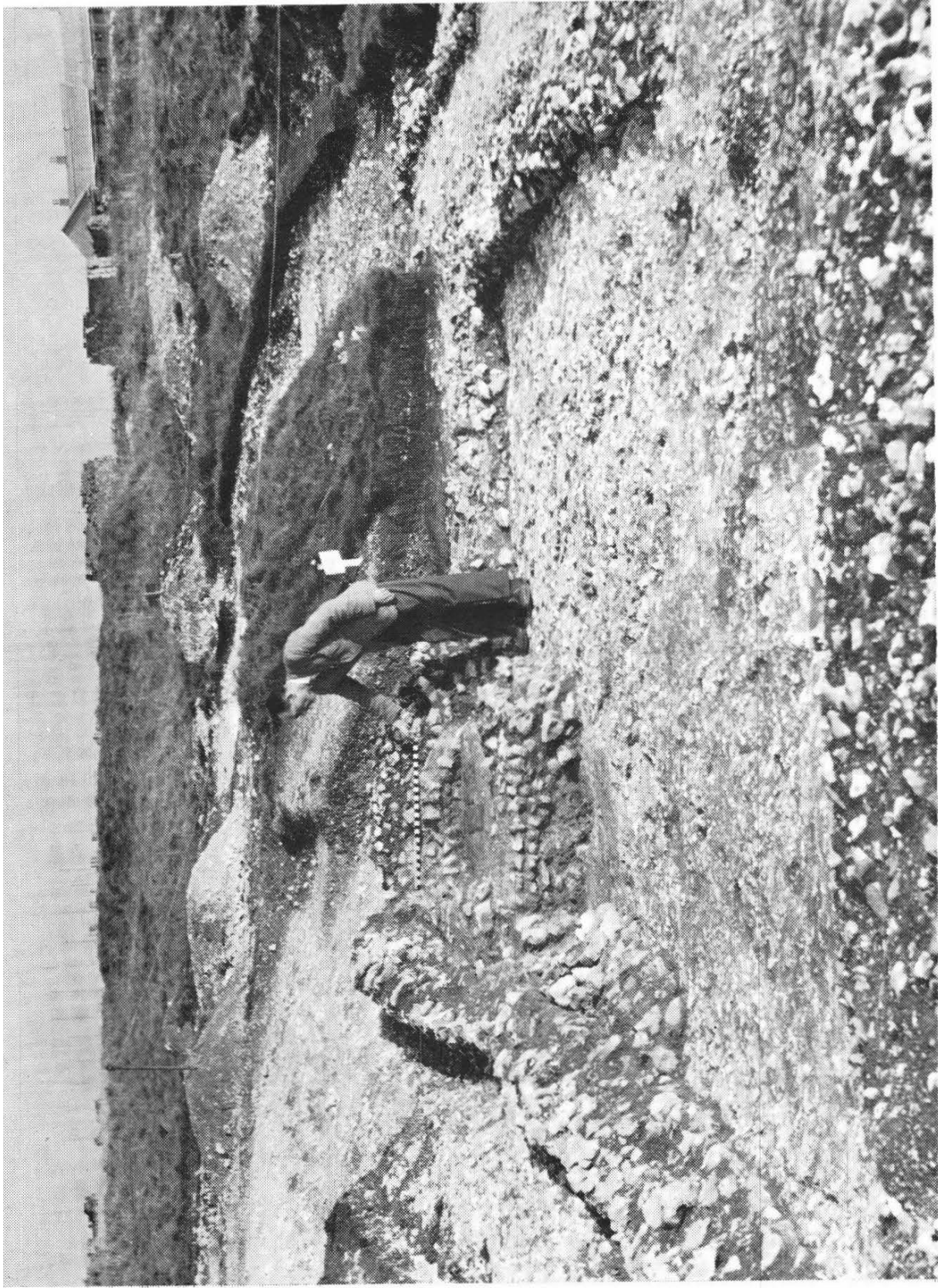


PLATE 1.

Acknowledgments to *Brighton and Hove Herald*.

BUILDING 3: VIEW LOOKING EAST (p. 85).

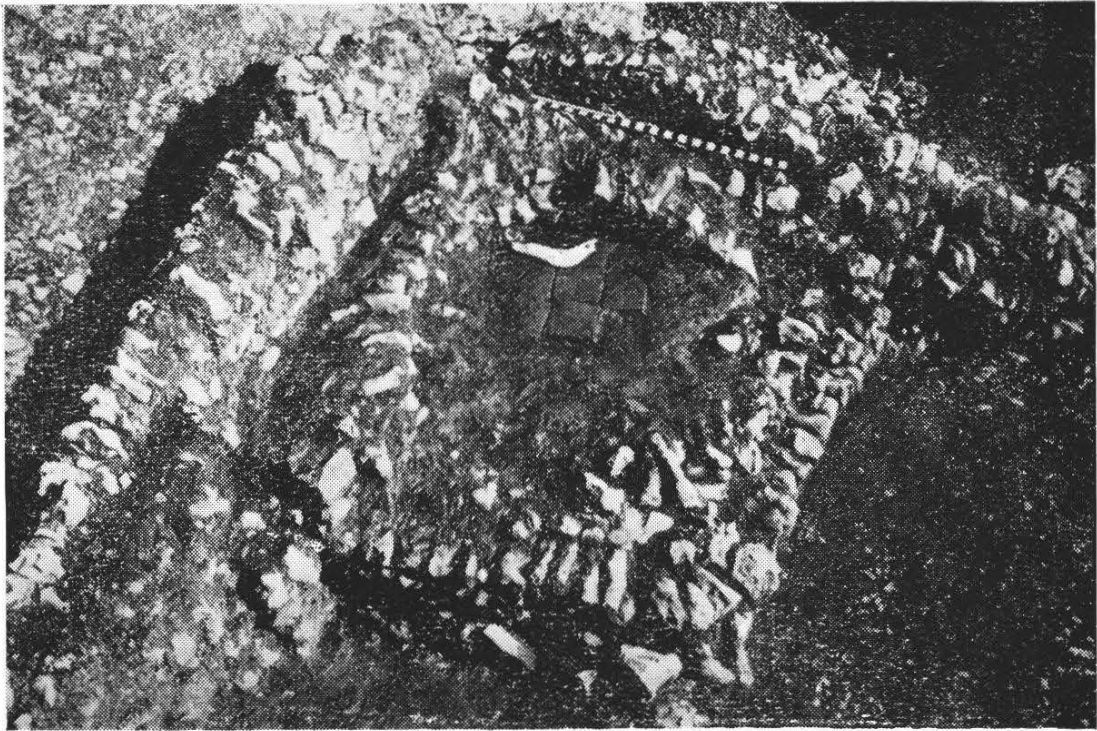


PLATE 2. BUILDING 3: THE OVEN (p. 89).

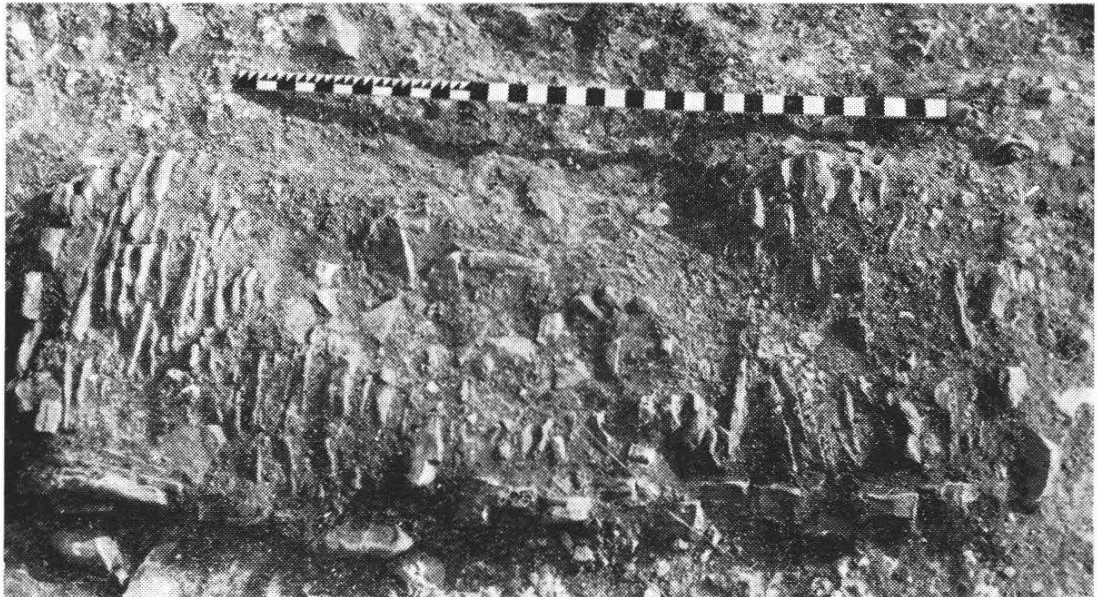


PLATE 3. BUILDING 5: THE HEARTH OF THIN PIECES OF SANDSTONE EDGED WITH TABULAR FLINT (p. 81).

When the clay under the tiled oven floor was removed it became apparent that the west wall was an addition to an existing inner flint wall, the bedding material of which consisted of brown clay mixed with earth and chalk. This inner wall was bonded to the oven south wall, the colour of the bedding being the same. An earlier oven floor of brown clay in which powdery pieces of tiles were visible was next discovered about 4ins. below the upper tiles. The lower floor passed under the inner courses of the flint dome and a few flints of outer courses had burnt faces. Thus was shown that the dome to the earlier oven had been almost completely demolished and re-built for the later oven. The main chalk floor was found to be burnt when the outer west wall was removed and the face of the earlier west wall was fire marked—though less severely than the later facing. A piece of green glazed jug (Fig. 24, 193) which cannot be dated closer than c. 1250-1350, but is probably late-13th century, was wedged under the outer oven wall. Subsequent demolition showed that the first oven was built after the main flint walls of the building had been erected, as the oven walls were not bonded to the structure and no inner lining walls existed on the north and east sides.

There were two marked differences between the earlier and later oven floors. The more recent one had a slight slope towards the entrance on the western side, while the first floor sloped in the opposite direction. The upper floor had been covered with $6\frac{1}{2}$ ins. square tiles having square stab-holes on the underside, with one exception, and the lower had originally been surfaced with tiles having round stab-holes. The exception to the $6\frac{1}{2}$ ins. tiles was a broken tile, one edge of which was more than $6\frac{1}{2}$ ins. long, and which had round stab-holes on the visible surface. When this tile was turned over, the other, originally upper, surface could be seen to have flaked away because of previous burning. Similar tiles from Building 1 measured 8ins. by 8ins. and it may be assumed that the tile in question was re-used for the later oven having come from the floor of the first oven where all tile fragments had round stab-holes.

The bedding for the earlier tiles was of brown clay over 2ins. of small burnt flints. This layer yielded a piece of sandstone quern, a few late-13th century sherds and a glass linen-smoother. The bottom filling below the oven floors was small chalk rubble and earth, in which were some late-13th century sherds, pieces of round-hole tiles, some small bones and a tooth of pig.

The main north wall of the building had been thickened at the base 12ins., for a height of 18ins., between the west face of the oven and the supposed line of the cross-partition. The reason for this was obvious as the north wall was leaning inwards and an attempt had been made to prevent further deterioration. This buttress wall was not bonded to the main wall, nor to the oven, but the yellowish puddled chalk mortar was the same as that used in the outer oven

wall. The signs of burning visible on the face of the oven wall did not go behind the end of the buttress, therefore the latter was erected at the same time as the oven was re-built. The various stakes or posts under the buttress wall must have been removed when, or before the strengthening was carried out. Under the buttress wall were two minute pieces of oven tile, three undatable sherds and a fish spine pin.

An irregularly shaped depression in the main chalk floor, filled with small chalk rubble, extended 3ft. outside the west wall of the later oven. The upper part of the filling was blackened by ashes and slightly hollowed through wear. The dark layer passed underneath part of the buttress wall and below the second west wall of the oven. Removal of the base of the oven showed that this depression extended nearly to the north-east corner of the building and it passed 12ins. under the main north wall. Apart from the black upper section of the filling outside the oven, the chalk rubble was clean and contained only two mussel shells, a piece of bone and seven small sherds of uncertain medieval date. From the whiteness of the chalk rubble and the irregular shape the conclusion is that this depression was a continuation of the medieval excavation to form a flat floor which was refilled when it was found that the decided level had been reached elsewhere. The stakeholes near the oven and north wall, some of which contained charcoal butts of oak, were formed in the rubble and did not extend into the solid chalk below. These, therefore, are contemporary with the first oven. Other stakeholes, in a group around the centre of the main floor, and others forming an arc near the oven corner, may have held uprights for a hurdle type of partition to shield the oven from the prevailing south-west winds which could have blown through the doorway. Dr. A. Steensberg¹ shows an equally primitive, though later dwelling, containing an oven which had a form of chimney near the mouth to convey the smoke through the roof. While there is no sure evidence that the stakeholes flanking the Hangleton oven mouth held uprights to form a wattled chimney, the possibility is there and is a point to be watched in future excavations of a similar nature. Four stakeholes between north and south walls indicate that a light partition may have divided the building into two compartments.

The quantity of pottery within the building suggests that the building was lived in and was more than just a bakehouse. The oven, however, is some importance, being the only example of the medieval period as yet found in Sussex in a reasonable state of preservation. Mr. R. Musson discovered the remains of a domed clay oven on the floor of a 13th century dwelling at Bramble Bottom, Eastbourne,² as well as oven tiles. Fragmentary remains of a

¹ *Farms and Water Mills in Denmark during 2,000 years* (Copenhagen, 1952), p. 127.

² *S.A.C.*, XCIII (1955), pp. 157-170.

Norman period flint domed oven have been discovered at Chichester.¹ Illustrations of medieval ovens, including those with a dome above a stone base, may be seen in *Life and Work of the People of England*.²

The remaining walls of the building were pulled down, a few mid-13th century sherds, a nail and one small piece of oven tile (without any stab holes), being found embedded in the flintwork. A broken spur was lying on the solid chalk underneath the north wall 5ft. from the north-west corner. This spur probably is of the 13th century, but the earliest possible date would be the second half of the 12th century.³

The floor of the main building had a scatter of pottery sherds ranging in date from c. 1250-1350, generally similar to those from Building 1. Clearance outside the walls yielded more, particularly between the east wall and the chalk scarp. Those from the bottom of the scarp were older, but they cannot be dated more closely than c. 1150-1250. Oyster and other sea shells, animal bones, pieces of Mayen lava and sandstone querns, charcoal, 3 pieces of slate, 1 piece of perforated sandstone roofing material, 82 nails, whetstones of schist and pebble, and knife blades were among the objects found. There was also a silver-gilt ring (Fig. 38, 18) lying in the small chalk and earth rubble 2ins. above the solid floor, near the south-east corner and within the building. Other small finds were a turned bone knob (Fig. 39, 1), a fragment of iron like the bottom of a carpenter's gouge or shell-bit (Fig. 37, 19), while the fragile remains of a buckle (Fig. 38, 19) were discovered a few feet outside the south-west corner.

The pottery evidence suggests the following building sequence.

1. Site levelled and a timber post building erected during the first half of the 13th century.
2. Chalk floor possibly lowered, walls rebuilt in flint, retaining some posts, c. 1250. The first oven was built after the erection of the flint walls.
3. The oven was rebuilt c. 1300 or early in the 14th century.

Scarping of the chalk outside the north-west corner suggested the line of a wall forming a small extension to the main building, the few remaining flints of the base of another wall limiting the size of the structure to 10ft. square. A small posthole near one corner and another at the side of the main building probably marked the opening to this annexe, which could have been a store-shed or pen for animals. A large well-cut posthole, 24ins. deep, having a bottom diameter of 11ins., with a smaller one adjacent, was found near the line of the north wall. It contained oyster and mussel shells and 3 sherds, c. 1250-1350.

¹ *S.A.C.*, XC (1951-2), p. 212.

² By Hartley and Elliott, pl. 3b (late-13th century), pls. 7b, 9e and 43a (14th century).

³ Mr. R. Merrifield, of Guildhall Museum, kindly advised on this object.

The L-shaped cutting on the sloping ground adjoining the north-east corner of the building was made prior to the discovery of the flint walls, the large amount of broken pottery, shells and bones found in the 6ins. layer of earth above the solid chalk indicating the presence of a domestic building. There were also 2 household knives, a spindle whorl and a few nails. A silver penny dated to 1351-2, found near the top of the bank, 15ft. north of the north-east corner of Building 3, was in a thin layer of earth 1in. above the solid and sufficiently far from the building for pottery to be scanty. It cannot, therefore, be used with any confidence in attempting to date the building. A salutary lesson on the unreliability of isolated unstratified objects was received when an 1891 farthing turned up in similar circumstances not far away.

BUILDING 8 (FIGS. 9, 13)

There were no surface signs of this building, but the bottom course of flints of the north wall having been uncovered during the examination of Building 3 led to an extension of that excavation. The east wall had a maximum thickness of 18ins. of flints with a large piece of undressed Sussex marble 4ft. from the north-east corner. The north wall was less well defined, being 12ins. wide, ending 8ft. from the corner probably at a doorway. The south wall was poorly marked by slight scarps and scattered flints. The natural chalk had been excavated to form a level surface from an irregular scarp outside the east wall, the floor contained within the walls terminating on a wavy line at an average of 10ft. from the east wall. The chalk then sloped down for 12ins., the medieval level being lost after a further 14ft. west owing to the presence of a golf bunker and modern bulldozing operations. The distance between north and south walls was 18ft., the south wall having a maximum length of 16ft. There was no definite trace of a flint west wall. The bedding material between flints consisted of earth and chalk, there being no lime and pebble mortar.

This building exhibited signs of having been constructed with at least one timber corner post within the thickness of the flintwork at the south-east corner, the hole being 11ins. deep with a bottom diameter of 6ins. A smaller post abutted and a third post with an 11in. deep hole may have added support as well as forming the end post of the external fence. Three small holes 3ins. deep and between 3ins. and 5ins. in diameter, and two shallow depressions were underneath the central portion of the east wall. Another 4in. depression, partly below the wall, occurred at the north-east corner and a small posthole adjoined the externally rounded face of this corner. Yet another 6in. deep posthole existed just outside the centre of the east wall. The holes and depressions underneath the wall most definitely were out of use when the flintwork was erected, for the bottom courses were properly laid and there was no question of loose flints having tumbled into the spaces previously occupied

by posts. These holes and depressions were the only signs of post construction preceding the flint building.

There was a posthole 8ins. deep against the inner face of the south wall, 12ft. from the south-east corner where the floor sloped to a lower level and which probably held a roof support. Another hole, 12ins. deep, occurred almost centrally between north and south walls, with a smaller hole nearby. The former was well positioned to act as a structural post, but the other had no obvious function. There was only a scatter of flints above the western scarp, thus eliminating a wall along this line. This scarp turned west for a distance of 7ft. where it met the south wall, ending in some heavy flint tumble, suggesting that the south wall had extended to this point. A gap in the flints may have marked a doorway, though a small posthole outside the centre of the opening would have been an obstacle had it held a post while the doorway was in use. There was a suggestion in a few scattered flints and a shallow hole 7ft. west of the north-south scarp that a west wall might have run from the western end of the south wall, but indications were too slight to be certain.

There were three depressions adjacent to the scarp between the different floor levels; that at the north end being cut into the slope and measuring 3ft. by 2ft. and 10ins. deep at the highest end. The two northern depressions, and more particularly the larger one, contained medieval sherds, oyster and scallop shells, bones, charcoal, small pieces of oven tile having square stab-holes, a knife blade and a fragment of slate. These scoops, while they could have held the butt ends of tree trunks for roof supports, may have had some other purpose which is not apparent.

There was a flint structure 9ft. by 6ft. in plan at the north-west corner. The chalk here was at the higher level, traces of flint walls being visible on three sides. Trodden chalk marked an entrance facing Building 3. A semi-circular hearth 2ft. in diameter¹ was inset in the south wall, the floor being fire marked and on which were some large pieces of thin sandstone, also fragments of burnt daub,² as if tumbled from above. Immediately behind the recess, at a higher level, was a 12in. deep circular hole with sloping sides, the top diameter being 2ft. Some fragments of charcoal were in this depression, but the latter was not burnt. Header flints partially flanked the hole, but the remains were too sparse for the construction of the original structure to be ascertained. It is possible that the heat from the hearth was deflected by means of the sandstone slabs into the chamber above, the latter being covered in some way, thus

¹ A similar feature was found in the M.P.B. & W. excavation.

² Mr. L. Biek reported, 'from a routine visual and X-radiographic examination (Cf. 'Chew Valley Lake,' *H.M.S.O.* forthcoming) it appears that the fragments are far more likely to be burnt daub than parts of any structure such as a hearth or furnace.'

making a primitive oven, not dissimilar from the 19th century iron cooking range where the oven is at the side of the firebox.

Alternatively, compare this feature with the corn-drying kilns at Beere where there were two oval chambers each with a short passage flue.¹ Whilst there is no comparable flue in the Hangleton example, the transference of heat from a firing chamber to another compartment could have been, and probably was, achieved in the Building 8 hearth. There can be no certainty that there was here any connection with the drying of grain. More credence could be given to this idea had carbonised grains been found, but there does remain the possibility of the hearth feature, and perhaps the whole of the corner structure, being used for such a purpose.²

Pottery within the walls of Building 8 was not as plentiful as in Building 3, but there was a sprinkling of sherds similar to those in the latter building and a fair quantity from outside the walls. Besides the expected finds of oyster, and other seafood shells, nails, a few bones of ox, horse, sheep and pig, Mayen lava and sandstone quern fragments, there were three horseshoes, an axe head, a small damaged arrow head, two knives and parts of two sickle blades, also a piece of the base of a stone mortar and a broken piece of hollowed sandstone.

Six feet away from the south wall was a pit 4ft. 6ins. long by 2ft. 3ins. wide, and averaging 2ft. deep, cut into the solid chalk, the sides tapering slightly inwards (Pit A, Fig. 13). The filling consisted of medium-sized flints interspersed with chalky earth. From the upper half came two dozen oyster and a few mussel shells, ox, horse, pig and sheep bones, including sheep horn cores, some late-13th century sherds, a tiny piece of Sussex marble and two nails. The base of the pit yielded a glazed jug handle (Fig. 26, 214), a few sherds and bones. The pit is almost certain to have been made during the life of the adjoining building, the absence of weathering on the chalk sides indicating that it was not open for any length of time. Its meaning, however, cannot easily be defined. Although there were animal bones and other rubbish in it their volume would have filled about one eighth or less of the hole. The bulk of the filling was of flints, not from the collapsed walls of Building 8, as the pit was well clear of the tumble. Had the pit showed traces of fire this might have raised conjectures relative to it being used for some form of cooking, but not one flint exhibited any sign of calcination. The comparatively small amount of refuse nullified the theory of a rubbish pit. Indeed, who would want to dig a pit in solid chalk when, unlike congested town sites, there was plenty of space available around the buildings for the deposition of rubbish. Such a pit could have been a latrine, but this would have required

¹ *Med. Arch.*, II (1958), pp. 123-4.

² Corn drying was necessary at W. Blatchington in R.B. times where several kilns were found: *S.A.C.*, LXXXIX (1950), pp. 19-35.

some form of shelter which would leave its mark in the form of postholes.

Another, smaller pit, filled with medium flints, measuring 3ft. by 2ft. and 16ins. deep, with a bottom diameter of 18ins. occurred in the low scarp 5ft. outside the centre of the east wall (Pit B). A few sherds, animal teeth and bones were at the top of the hole, the jaw of a sheep and one cockle shell being near the bottom.

The similarity of the pottery found in and around Buildings 3 and 8 indicates that they were in use at the same time. The closeness of the two buildings implies that their functions were inter-related and they could well have been a joint family holding. In considering their relationship there is no certainty that both were dwelling houses. Building 8 could have been used for living, while Building 3 was a bakehouse, communal or otherwise; but the latter was big enough to house a small family. Building 8 cannot definitely be designated a barn, or other agricultural building on the slender grounds of there being somewhat less domestic pottery found in it than in Building 3, but the probability of it having been so used is there.

PALISADES TO BUILDINGS 3 AND 8 (PL. 4, FIG. 9)

Chaucer, in the Nun's Priest's Tale describes his poor widow as dwelling in a small two-roomed cottage:

‘ A yerd she hadde, enclosed al aboute
With stikkes, and a drye dich with-oute ’

Although the dry ditch was absent, perhaps because of the natural drainage of chalk subsoil, evidence was afforded of fences or palisades surrounding open spaces to some of the buildings at Hangleton, notably Buildings 3 and 8.

Trial cuttings on the small plateau north-west of these buildings soon struck an intermittent shallow runnel in the solid chalk in which there were small holes for stakes and larger ones for stronger posts. A slight change in the colour of the topsoil above the runnel, darker on the side away from the buildings, allowed the line to be located and the cuttings extended. Parallel to Building 3 and 54ft. north-west were the holes for a 98ft. length of palisade running in an east-west direction, a modern golf bunker terminating the line at the western end. These postholes were filled with consolidated small chalk rubble without any flint packing such as is found in most of the prehistoric postholes on the Sussex Downs. The large holes, irregularly spaced, varied in depth from 8ins. to 14ins., except one which reached 18ins.; the stakeholes being 3ins. to 6ins. deep. Two only of the postholes in this section contained sherds, not closely datable, but not earlier than *c.* 1250.

A change of direction occurred at the east end a short distance from the base of a ‘ Celtic ’ lynchet, the palisade now travelling for 100ft. in a south-south-easterly direction flanking a metalled track (Track 2) and turning into the south-east corner of Building 8.

The technique of digging runnels ceased soon after leaving the corner, the first 40ft. having shallow post-holes. The land then began to slope down towards the building, the postholes becoming more frequent and of greater size and depth. Some double post-holes and smaller ones close to the general line of palisade at this point showed renewal or strengthening of posts. Pottery was plentiful all over the cuttings, particularly in the area near the north-east corner of the palisade, with a dating range of *c.* 1250-1350. Whetstones of sandstone and schist, fragments of querns, animal bones, some tiny pieces of slate and oyster shells were among the finds. Four postholes yielded a few sherds, *c.* 1275-1325, shells, one piece of slate and knifeblade.

Eleven feet west of where the palisade joined the south-east corner of Building 8 another section was traced, leading away from the building for a distance of 14ft. and then turning west to be lost under mounds of builders' spoil. Part of the palisade had a runnel with small stake holes additional to the postholes. Two of the holes contained medieval sherds and there was the usual sprinkling from the surface.

Surface pottery on the disused golf green, some 30ft. west of Buildings 3 and 8, prompted further exploration. Ten postholes were found of which those on the west side may have formed part of a palisade. Large soil dumps prevented further search to the west and a high modern golf embankment and bunkers demarcated the southern end of this cutting. Three postholes of uncertain meaning were in a slight hollow; nearby there was a 10ins. deep flat-bottomed pit filled with chalk (Pit C). An 8ins. deep channel packed with very hard fine chalk ran in a northerly direction for 27ft., though its function could not be determined. A considerable amount of pottery (*c.* 1250-1350) was scattered over the southerly part of the cutting, also a cache of 150 oyster shells, a horseshoe, a small iron loop, 32 nails, some slate, animal bones and Mayen lava. The presence of another building was suspected, because of the quantity of the finds close to the southern edge of the cutting and the presence of large walling flints under the golf bank where a right-angled depression appeared.

TRACKWAYS

Medieval Hangleton was not, like some Downland villages, set in isolation; West Blatchington, Aldrington and Portslade all being within a distance of one mile. An old road coming from the direction of Shoreham passes through Portslade, is diverted round Hangleton Manor House and climbs the hill towards the church, whence it continued as a farm road (until 1959) as far as the railway crossing (Track 1). It then changed to a deep, unmetalled, green hollow way travelling to the crest of the downland and skirting the north side of Building 5. Nearly all of this track has now disappeared.

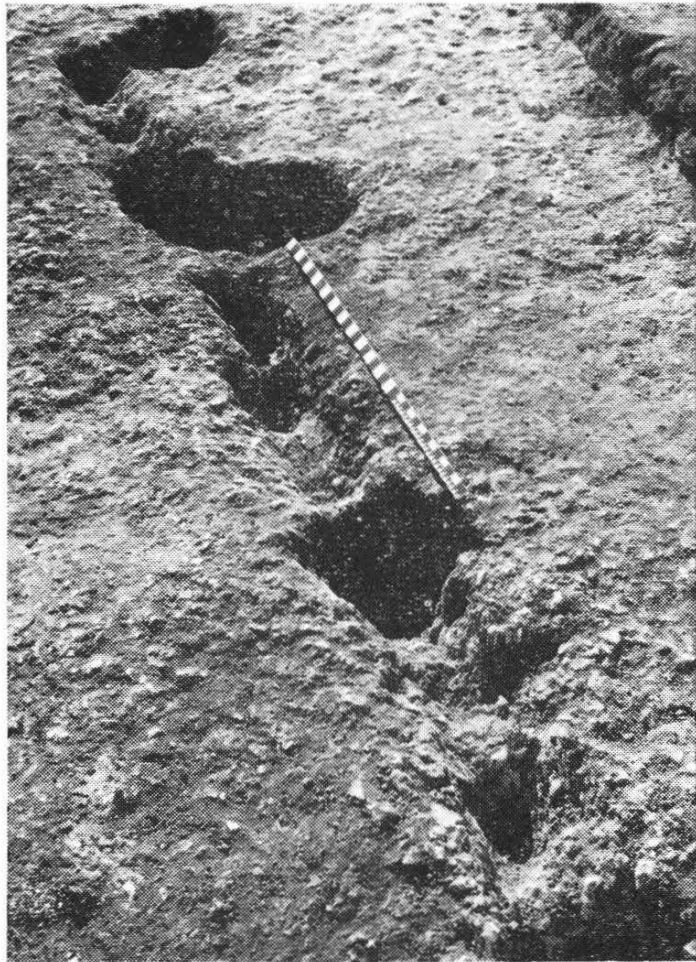


PLATE 4. PALISADE NORTH OF BUILDING 3:
POST AND STAKE HOLES (p. 97).

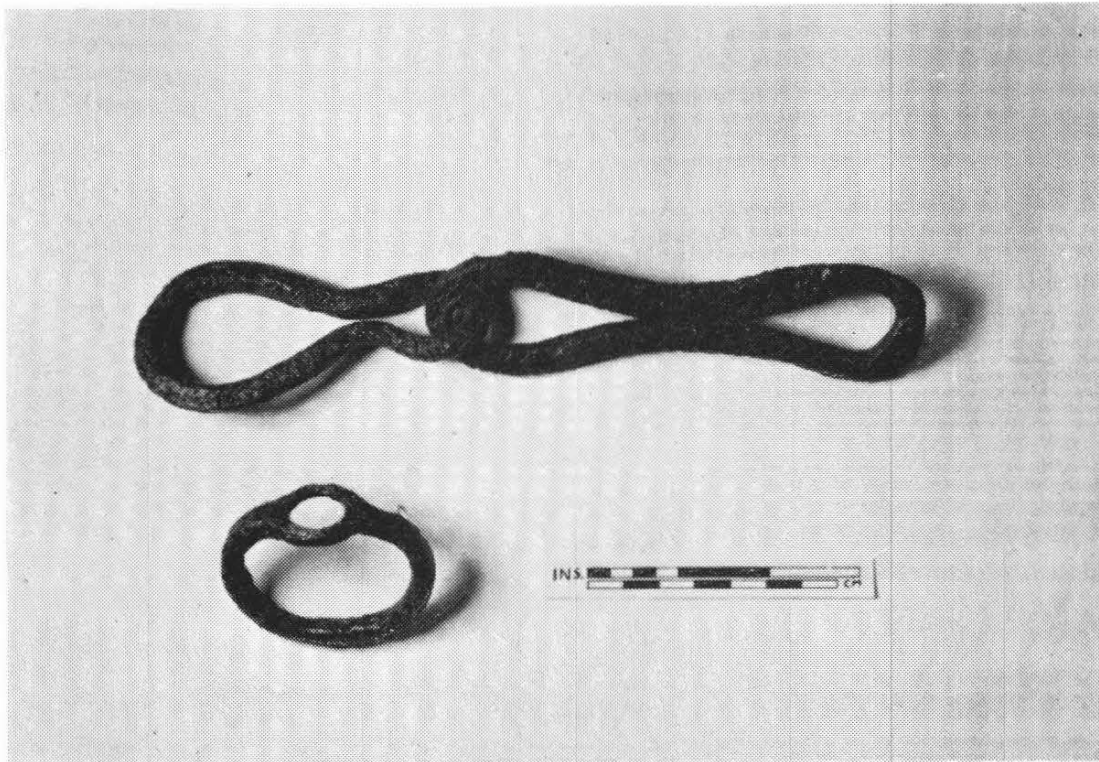


PLATE 5, IRON OBJECTS FROM BUILDING 1, (See Fig. 37 and p. 169).

From the direction of the Devil's Dyke a pre-Roman double-lynchet way follows the spur from Round Hill in a south-easterly direction towards our site.¹ Messrs. N. E. S. Norris and G. P. Burstow² suggest, with supporting evidence, that this ancient road traversed the full length of the spur, as do most of the local ridgeways, to West Blatchington and beyond. Shortly before reaching the northern part of Hangleton medieval site a branch track from the now lost road to West Blatchington followed the top of a positive lynchet to join Track 2. This passed down the face of the lynchet and became the metalled road alongside the palisade by Building 3. A section through the flint metalling where it was about 9ins. deep (Fig. 9, A-A) yielded medieval sherds and oyster shells throughout its depth, while another section near the corner of the palisade gave similar findings, plus a piece of Mayen lava quern. The metalling ceased before reaching Building 8. A noticeable feature of the flinty layer abutting the palisade was that it stopped directly over the line of the postholes and was, therefore, coeval with the palisade. This track continued as a slight hollow through the M.P.B. & W. site, passing north of Buildings 2 and 1 to join Track 1 near the farm cottages. The worn hollows in the solid chalk forming Track 2 were visible in both sides of the railway cutting after the latter had been quarried for chalk for use in modern building operations.

Although Track 2 may not have come into use until medieval times, the road from Hangleton to Portslade has been proved by the Drs. Curwen to be of considerable antiquity. The depth, in places, of the hollow forming Track 1 suggests a remote date for its formation and one can be reasonably certain that both Tracks 1 and 2 were in use during the life of the village.

A modern sewer trench was cut across Track 1 in line with the north wall of the churchyard (Fig. 15). This showed that the road materials of tarmac, flints and chalk rubble were of recent date, the early road having been hollowed into the solid chalk by centuries of wear. A part of the ancient track showed as a shallow depression with small flints, clay and chalk silt lining the bottom. The old surface on the west side had been levelled for the later highway. The flint walls each side of the road stood on top of earth banks and it could be seen in section that they were not the original boundaries. A shallow ditch underneath the west wall had silted up, the base of the wall not penetrating the silt. The east wall was built into earth under which was chalk silt with a deeper ditch 3ft. inside Field 7. Thus it could be seen that the earlier roadway had been bounded by ditches. A similar western ditch was seen during trenching for

¹ Described by the late Dr. Eliot Curwen and Dr. E. Cecil Curwen in 'Ports Road,' *Brighton and Hove Archaeologist*, III (1926), pp. 28-41.

² 'A Prehistoric and Romano-British Site at West Blatchington, Hove,' *S.A.C.*, LXXXIX (1950), pp. 1-3.

houses at two points between the church and the Manor House on the field side of the hedge which lately flanked the road.

Traces of one more track were noted on the east side of Buildings 4 and 5, running along the base of a lynchet, the chalk having been worn hollow through much use. The northern end must have terminated at Building 5, but whether the southern portion curved to join Track 1, or led away elsewhere was not discovered.

ISOLATED PITS

A few small pits or depressions close enough to buildings to be presumed to have some connection with them have already been described. There remain, however, several features discovered fortuitously during the excavation of trial trenches or sewer and foundation trenches which, although difficult to explain, have a place in this record.

A sewer trench passing across Building 4 showed four depressions, varying between 6ft. and 10ft. long, with an average depth of 3ft. 6in. from ground level, or 1ft. 6in. to 2ft. below solid chalk. These occurred between 25ft. and 70ft. south-east of the building. They could have been shallow pits or ditches cut obliquely by the trench, but road making prevented any extension of the cuttings which would have been necessary to plan their shapes. These pits or ditches were filled with earth, small chalk rubble and small flints, with some fine chalk silt at the bottom. A few coarse, dark, gritty sherds extracted from the upper filling are of early-13th century date. One depression yielded four flint pot-boilers and two others, one each. The sparse finds suggest some connection with cooking.

The trench for a watermain which revealed two postholes adjacent to Building 4 also cut through a depression about 50ft. north-west of the building. This was 8ft. wide and cut 9in. into the solid chalk with sloping sides, the filling being small chalk rubble and earth. On top of this was the medieval turf line on which was superimposed 14ins. of later ploughsoil. It being impossible to make transverse cuttings, owing to stacks of bricks, such objects as could be extracted from the visible faces were removed. These were seven late-13th century sherds, two horn cores of sheep, teeth and small bones, a boar's tusk, a large nail and two oyster shells.

House foundation trenches disclosed the presence of a circular pit about midway between Buildings 4 and 5 (Pit E, Fig. 14). This pit had a top diameter of 6ft., tapering sides reducing the bottom, which was slightly rounded, to 4ft. 6ins. diameter; the depth was 4ft. 6ins. below the surface. There was but 3ins. of topsoil, the pit having been dug in the solid chalk. Part of the pit was emptied, adjoining spoil heaps preventing the whole being cleared. Apart from some chalk rubble and silt at the bottom and a thin central layer of small chalk, both barren of finds, the general filling was of clayey earth mingled with some flints. The upper half contained a quantity of gritty sherds from cooking pots showing signs of

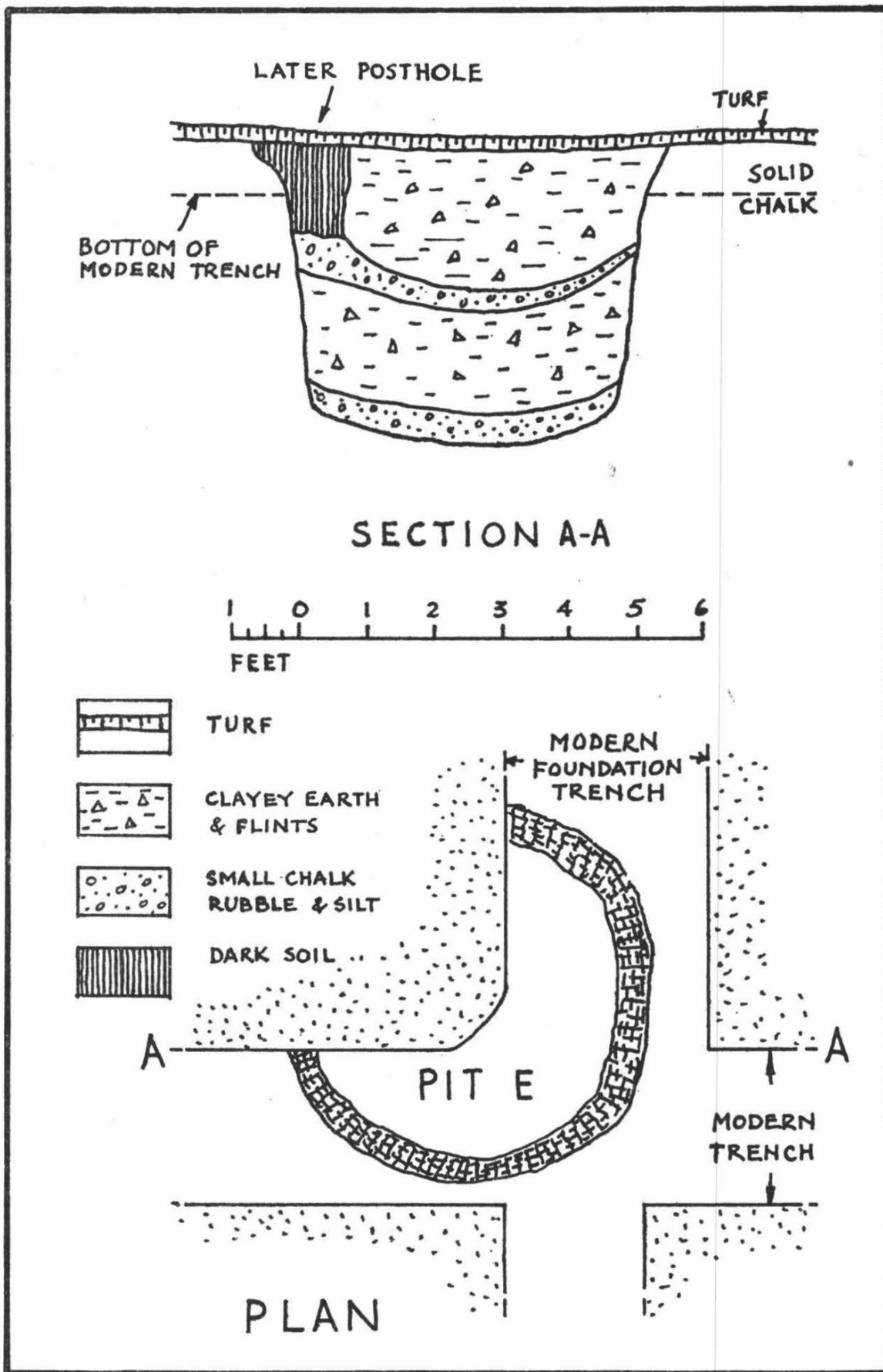


FIG. 14. PIT E: PLAN AND SECTION (p. 100).

burning. There were several rims which are dated to the early-13th century. There were, in addition, jawbones of pig and sheep, ox bones, a horn core of sheep, a piece of sandstone quern, and three oyster shells, one of which was perforated with a square hole. Ox, pig and sheep bones came from the lower level, a mussel shell, a large nail and some sherds of a large vessel of the early-13th century. The quantity of bones compared with the amount of earth was insufficient to designate the pit as one primarily for the reception of rubbish. A dark pocket of earth in the top layer indicated the position of a later posthole of purpose unknown.

While searching for traces of Track 2 a pit was found 25ft. south-east of Building 8. This pit (Pit D, Fig. 9) was oval in plan, the top measurements being 7ft. by 6ft., the roughly cut sides sloping to 4ft. by 3ft. at the bottom. The depth cut into the chalk subsoil was 18ins. The filling was of flints interspersed with chalky earth, all very well consolidated. The topsoil and uppermost level of the pit gave up some late-13th century sherds, oyster and mussel shells, two nails and a tiny piece of slate. The flint filling yielded similar objects with the addition of some small animal bones, fragments of Mayen lava and one piece of oven tile from the bottom. Many of the flints bore traces of burning. So hard was the filling that it can be assumed the pit was deliberately filled and rammed.

The round-bottomed depression at the lower end of the sewer trench in Field 7 (Fig. 15) and seen later during house building is the old track from the south-east corner of the churchyard to the dove-cote.

SITES OF OTHER BUILDINGS

There were in the vicinity of the buildings either partially or completely excavated signs of three or four more, also two or three east of the church.

Fifty yards south-west of Building 5 was a rectangular mound which, when mutilated by heavy vehicles, gave up quantities of pottery sherds similar to those found in Buildings 1 and 3, nails and oyster shells. Heavy flints showed that walls had once stood there (Fig. 3, no. 6).

About 20ft. south of Building 5 the corner of a flint and mortar wall showed in the edge of a new road cutting. Watermain trenches on the other side of the road cut through heavy flint walls. Exploration was impossible because of spoil dumps, but the evidence exposed by the machines showed that a flint building about 30ft. by 20ft. was close to Building 5. A few sherds of pottery found were within the dating range *c.* 1250-1350. (Fig. 3, no. 7).

The corner of another flint building, 30ft. south west of Building 3, has already been mentioned at the end of the description of the palisades to Buildings 3 and 8.

Trial trenches south-west of Building 1 failed to locate any more houses, spoil heaps preventing further investigation in that direction.

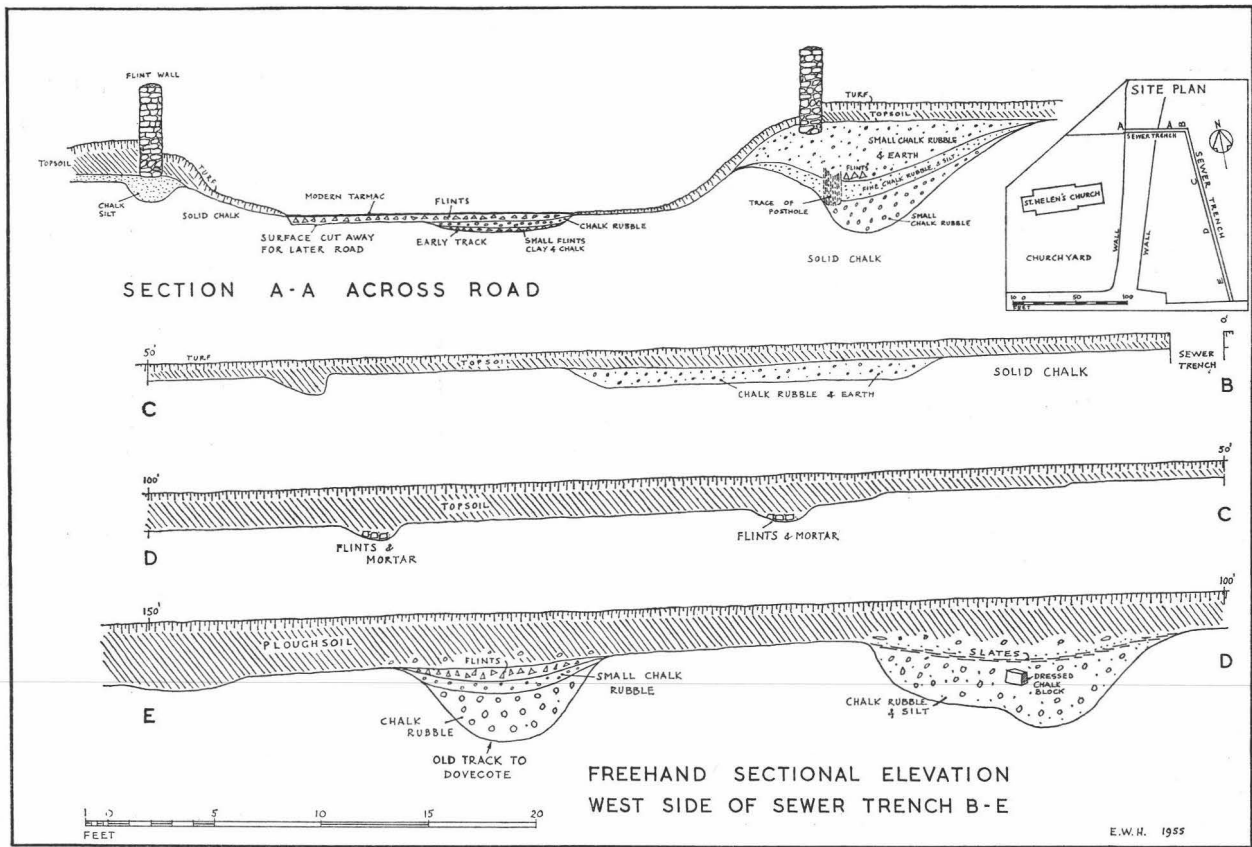


FIG. 15. SEWER TRENCH: FEATURES REVEALED BY MECHANICAL EXCAVATOR (p. 104). SECTION ACROSS ROAD (TRACK 1). (p. 99).

Aerial photographs show only faint disturbances, but being taken at the wrong time of day for archaeological purposes, they are of limited usefulness. The writer, however, has a distinct recollection of at least one more mound between the new Dutch barn and Building 1 which could have been the site of a building.

A deep sewer trench was sunk in the small enclosed meadow east of St. Helen's Church, and made a sharp turn across the road to the new Church Hall (Fig. 15). The plot is marked on the 1841 Tithe Map (Fig. 2) as 'Yard, Barn and Shed' (no. 7) next to 'Pigeon House Field' (no. 9). No signs of building were visible prior to trenching. Solid chalk appeared under 9ins. of topsoil, the latter deepening to 2ft. 6in. at the southern end of the trench. A few feet after the turn in the trench, the excavated material contained large quantities of thick broken roofing slates, some fragments of glazed ridge tile, broken roofing tiles, lime and pebble mortar, large flints, nails, a horseshoe, a knife blade, oyster shells, animal bones and a small amount of 14th century pottery. There were also some broken pieces of dressed masonry and lumps of tooled chalk.

Near the northern end of the long trench a 12ins. deep sinking in the chalk extended for 12ft. in length and had gently sloping sides. No pottery, slate or walling flints could be seen in the sections visible on both sides of the trench. This feature could have represented the floor of a post-construction hut, a track, or a section across a simple depression. The solid chalk level showed some slight disturbances over the next 36ft., when the base of a wall was encountered and another, 19ft. farther along the trench. Here it is certain that there was a building, for not only did the bases of the flint walls rest in hollows formed in the chalk, but the greatest concentration of slate occurred in the upcast over and for about 25ft. each side of the extent of the building. Fortunately, the trench cut almost at right-angles across the walls, giving an internal dimension of 16 or 17ft.

Some 18ft. south a pit was sectioned showing on the west side as 12ft. long with a maximum depth of 6ft. below present ground level, or 4ft. 6ins. below the solid chalk; the bottom was irregular. The pit had silted almost to the solid level with loose chalk rubble and then occurred a thin layer of slates, above which was more chalk silt, chalk rubble, slate and earth. The lower filling contained a large dressed chalk block which had fallen in or had been deposited there when the pit was silting up and before the deposition of the slate. The east side of the trench passed through the top edge of the pit, the bottom of the filling being only 6ins. below the solid level. Notwithstanding the large quantity of slate fragments, not one was found complete. They were blue-grey in colour, some fragments having peg holes and most of them bearing traces of fine mortar. This building was the first one to be discovered where it is probable that the roof was substantially covered with slates.

More house building in 1960 uncovered traces of another building about 150ft. east of the church, not far from the sewer trench. The modern trenches showed in section two large depressions containing a fair quantity of broken roofing slates and tiles, oysters, flints and mortar, a chalk spindle whorl and a few 14th century sherds. No house plan could be made from the visible signs and excavation was prevented by the speed of building operations. The quantity and type of slate agreed with that from the sewer trench, with the addition of a few small pieces of green slate. A shallow ditch 2ft. wide ran eastwards towards the site of the dovecote.

Elsewhere in this paper mention is made of the Inquisition in 1339 taken on the death of Thomas de Poynings wherein is stated 'a dovecote worth yearly 12*d.* and not more because old and ruinous.' There is now an ancient circular flint built dovecote in the Manor House garden, but the name 'Pigeon House Field' which lay east of the church, is suggestive of another site (no. 9 on Tithe Map, Fig. 2). Although no excavations have taken place, the site of the dovecote could be seen (prior to road making in 1959) 100yds. east of the church, 20yds. south of the now demolished farm wall, at the junction of Fields 7 and 9. This showed as a hollow overgrown with nettles and surrounded by the base of a wall, all turf covered, more oval than circular in plan. A dovecote is shown approximately in this position in a drawing by Lambert, dated 1782, from the Burrell Collection at the British Museum.¹

Houses were built in 1956 on the north-west side of the road joining the Manor House to the Church. Trenches were watched, but no signs of medieval or other disturbances (apart from the shallow boundary ditch) were noted. This road, which is the south-west continuation of Track 1, was widened in the same year on the south-east side, no disturbances being seen. It is, therefore, fairly certain that the medieval buildings adjacent to and north-east of the Church formed a separate group from any that may have existed on the site of the Manor House and its ancillary buildings a quarter of a mile away.

A few yards north of the Manor House, on the other side of the road, lay a field known as Hog Croft. Mechanical excavators very soon altered the contours and may have removed medieval remains, because pottery, oysters, fragments of slate, mortar pebbles and large flints were to be collected in various parts of this field. Absence of definite evidence of buildings, however, precludes a claim to the existence of any in Hog Croft, although the scattered finds suggest the possibility.

The area next to be observed during sewer trenching was in the road running north and south on the west side of the Manor House. The trench passed through the dry pond, the latter being lined with clay and which yielded no evidence of ancient origin. West of the

¹ Add, Burrell, 5677, f. 38.

old west wing of the Manor House the early ground level was 2ft. below the farm road, the latter having been made up with chalk rubble and topped with flints during post-Tudor times. A few yards farther north along the trench was a small pit filled with earth, ash and Tudor brickbats. Not far from this pit were medieval slate fragments on the original ground level, also oyster shells, charcoal, bones, mortar and pieces of floor tiles. A drain trench at right-angles to the sewer, adjacent to these finds gave up slate fragments and Tudor brick from the same level. No walls were encountered, but the presence of a building of the medieval or Tudor period at this place is a reasonable assumption.

HOUSE TYPES

The humble dwellings of the villagers were of simple, single-storey construction, principally of materials found easily to hand. The walls of a house would be of flint, not more than 4ft. to 5ft. high, surrounding the rough, natural chalk floor. There would be unglazed shuttered windows, sometimes timber partitions as in Building 1; a hearth on the floor, the smoke from which would escape through a hole, louvre, or gablet¹ in the roof. In the absence of extra flint tumble at the ends of buildings it must be implied that roofs generally were hipped and not gabled, although it would be practicable for gables to have been timber framed. Some of the buildings utilised clay tiles, small 'slates' of Horsham stone, or imported Devon or Cornish slate for covering part, if not the whole, of the roofs which may otherwise have been thatched with straw. Had slate been the predominant roof covering gable ends would no doubt have prevailed owing to the difficulty of mitreing and weathering hips. None of the slates and tiles bore signs of having been cut for that purpose. There was evidence that some buildings had first been constructed with a framework of timber posts, replaced later almost entirely with flint. No standard house-type emerged, most being simple rectangles, with the exception of Building 1 which conformed to the 'long-house' plan. Here there was the probability of animals having been housed under the same roof as humans.

THE PARSONAGE HOUSE (FIG. 16)

It is recorded in the Portslade Parish Register: 'Through the sacred Providence of Almighty God the old Church Register of Portslade was burnt by Lightning together with ye Parsonage House of Hangleton on Thursday 31st of May between 4 and 6 morning 1666 John Temple, clerke being ye Rector thereof.'

In 1340 the Inquisitiones Nonarum note that 'the rector has a house and garden', while a Terrier of Glebe Lands and Buildings

¹ A gablet is a miniature gable below the termination of the ridge where joining a hipped end. This feature is to be found on many existing old roofs in Sussex. See M. W. Barley, *The English Farmhouse and Cottage* (1961), Fig. 5.

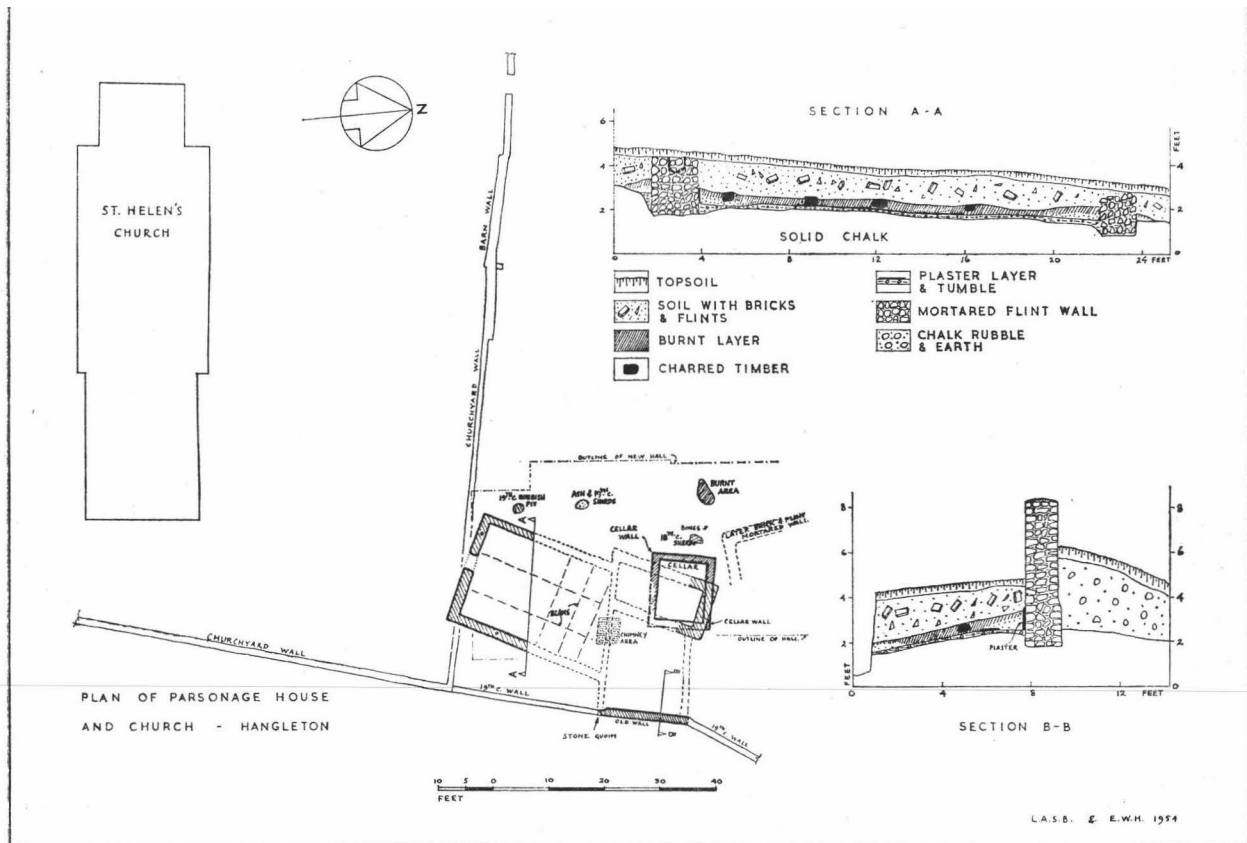


FIG. 16. PARSONAGE HOUSE: PLAN AND SECTIONS (p. 106).

of 1635 records a Parsonage House, a barn, a close and parcel of land having the Church on the south and the highway on the east.¹ Hangleton Parish Register contains an entry of 1769 giving the dimensions of a piece of ground belonging to the Rectory, lying on the north side of the old Parsonage House, the Barn close adjoining. A barn is shown on the north side of the church in Lambert's drawing of 1782, also in a very similar sketch from the Sharpe Collection dated 1802, and on the Tithe Map of 1841. This barn may have been pulled down by 1847 as it does not appear in Quartermain's sketch of that date.² The lower portion of the southern end of the barn may still be seen in the churchyard wall.

It was, therefore, reasonable to expect that the Parsonage House had stood in the south-east corner of the enclosed glebe land north of the church. The flint wall on the east side of this land was probably 19th, or at the earliest, late-18th century work, and was 9ins. thick at the top, thickening to 12ins. at the base. At 26ft. 6ins. from the corner of the churchyard the wall deflected from its straight course and thickened to 18ins. for a distance of 16ft. 8ins., then reverted to 9ins. thick, accompanied by another change in direction. The section of stouter wall was of selected header flints laid in mortared courses of uniform thickness throughout its height of 3ft. 8ins. above ground, the southern end having three pieces of sandstone quoin still in situ. It was obvious that this length was older than the rest of the boundary wall and later was found to be part of the Parsonage House.

In preparation for the foundations of the church hall, part of the eastern section of the glebe land, in area 120ft. by 35ft., was cleared rapidly by mechanical excavator. The fall of the ground from east to west necessitated the removal of topsoil and chalk to a uniform level, cutting in to a depth of 4ft. 6ins. at the east. During the course of this operation remains were found of a burnt building containing three rooms on the ground floor.³ Although no evidence was forthcoming to prove the existence of a former upper floor the Hearth Tax of 1662 and 1664 shows that the Rector's house had four hearths; therefore it is probable that the building had another storey. The floor level of the rooms followed the gentle slope of the ground with only a slight cutting into the chalk on the east and north.

Evidence of occupation of the site previous to the main erection was provided by fragments of 14th century pottery similar to examples from the village site. This pottery, when found in situ, and not in the loose soil upturned by the scoop, lay outside the house area. At two points the medieval sherds were at the same level

¹ *S.A.C.*, XXXIV (1886), p. 181.

² At Barbican House, Lewes.

³ I am indebted to Dr. Lawrence Butler for watching the mechanical excavator, recording wall positions and salvaging materials; also for writing the draft for this report of his work on the Parsonage House. The Hall was built in 1954.

as the house floor, but immediately outside—perhaps indicating that the destroyed house occupied the same ground as an earlier building. At other points the medieval scatter was to the north of the burnt house area, but no definite level was traceable; one 19th century rubbish pit contained two fragments of typical 15th century pottery, presumably disturbed at the later date, or included in the filling of the pit from the soil around. There was no indication of an earlier building within which these finds lay.

The destroyed rectory could be identified by the burnt layer of charcoal, ash, brick rubble and plaster which was in places as much as 8ins. thick. The building was roughly T-shaped in plan. The existing piece of flint wall marked the end of the eastern room, which measured internally 14ft. by 16ft., the line of the north wall being found. Outside the east wall the bank flanking the road had carried away all trace of the building's destruction. Inside (Fig. 16, B-B) remains of pink washed plaster still adhered to the flints. There had also been a slight tumble of plaster, and at a point 2ft. 4ins. from the wall, the plaster layer still divided the chalk and clay from the burnt layer. In this burnt layer, which was noticeably thicker near the wall, one small beam remained in section. At this end of the room were four fragments of Bellarmine and dark green glazed pottery sherds. On the southern side of the room a large number of Tudor bricks and tiles suggested the position of a hearth or chimney stack, but this area was badly disturbed. Only the foundation trenches remained of the western and southern walls.

Of the smallest room traces of the northern wall were discerned and these, 2ft. 6ins. thick, proved to be more solid than any other on the site. The normal burnt layer had been disturbed by later rubbish pits and a bonfire. The difficult conditions of excavation prevented the outlines of the room being traced with certainty, and there was no indication of how the roof fell or whether there had been an outside door.

Some weeks after the clearance of the ground workmen preparing foundations for a steel column found a cellar at the north-west corner of the Parsonage House. This measured 10ft. 6ins. east to west by 8ft. 6ins. and 4ft. deep, a 4ft. wide section being excavated at the west end. The walls were of flints and mortar, 12ins. to 14ins. thick, the upper parts of the visible internal quoins being of chalk blocks while the lower courses were of bricks, in size 9ins. by 4½ins. by 1½ins. The bonfire area above the cellar filling contained coal, late-19th century pottery and clay pipe stems including one bearing the name *J. DRAPE BRIGHTON* (1865-1868). The filling down to the solid chalk bottom was of chalky earth, flints, mortar and broken bricks. Among this were some chalk blocks, one piece of dressed masonry, a few fragments of Horsham roofing stone, some 4ins. square greenish glazed floor tiles, parts of clay roofing and crested ridge tiles. There was also a quantity of ox leg bones, pig, sheep and ox jawbones and the jaw of a dog.

Throughout the filling were pieces of Bellarmine, external type plaster coated with limewash with lath marks on the back, burnt daub, brown, orange and olive-green glazed sherds, nails, four pieces of slate, one perforated oyster shell, some broken bottle glass and two clay pipe stems. Ten pieces of thin window glass were near the top, while a few fragments, plus a piece of lead jointing strip, were in a 2in. layer of charcoal right on the bottom. Sufficient of the glass remained to show that the panes were diamond shaped, the sides being at an angle of 67 degrees to the horizontal.¹

It is possible that the fragments of 2ft. 6ins. thick flint wall found at ground level in the north-west section belonged to a later building, other traces of which were lost through the activity of the mechanical excavator. Yeakell and Gardner's map of 1780 shows, in addition to the barn on the north side of the churchyard, another building on the site of the Parsonage House. Other traces of late brick and flint walling were found a short distance away from the north-west corner, although they appeared to belong to a separate structure. It will be noted (Fig. 16) that the cellar walls do not coincide with the thicker walls above, but the west wall of the cellar is parallel to the east wall remaining in the field boundary. This suggests that the cellar was part of the rectangular north wing. As the cellar contained objects contemporary with the date of the fire it must have been in use at the time and was not an earlier feature.

Measurements of the building discovered while the machine was operating were taken by L. A. S. Butler, while E. W. Holden was responsible for excavating and recording the position of the cellar after all other traces of the house had been removed. It is possible that errors may have been made and it has been tempting to juggle with the plan to make the cellar and walls above agree in orientation. This has, however, been resisted, the final drawing showing the walls as recorded.

The least disturbed room was the southern one, measuring internally 17ft. (east to west) by about 25ft. The walls were of mortared flint 2ft. 3ins. thick on the south and 1ft. 9ins. thick on the east and west, set in a foundation trench cut 6ins. deep in the chalk. The southern wall had been disturbed over much of its length by the construction of the churchyard wall above it, thus causing the old wall top to be levelled off to follow the later slope of the ground. The old wall stood to a height of between 1ft. 6ins. and 2ft. except at a point 9ft. 10ins. from the eastern junction. Here there was a gap 2ft. 9ins. wide, and a posthole 6ins. deep either side of the gap suggested a doorway at this point. Although there was no longer a door sill, the burnt layer spread out over the flint filled trench and a piece of white glazed pottery was found here. The walls had

¹ Mr. G. H. Kenyon kindly examined the glass and considered that it was not earlier than 15th century and not later than mid-16th century. The examples were crown glass, weathered on one side, indicating use for some time and they exhibited typical fractures due to fire.

probably been only 2ft. high since at two points there were holes in the wall top for the reception of timbers of the upper structure. In several places the inside of the wall still retained a white plaster coat—often fire blackened; more tumbled plaster overlying the floor showed the matrix of wattlework from the timbered upper part.

The floor within the south room was the natural chalk with a thin layer of clay in places. Over this and the patches of tumbled plaster spread a burnt layer 3ins. to 8ins. thick. Inside and outside the east wall was this layer thickest; it contained pieces of red clay roofing tiles and Horsham stone. Four charred oak beams at roughly 4ft. intervals showed clearly in section (Fig. 16, A-A). It is impossible to decide with certainty whether these were timbers of the roof or whether they supported an upper floor. The regularity with which they fell would be surprising if from the roof, therefore it is most likely that they represent joists from the first floor. At the northern end the ground was much disturbed, but the hearth or chimney area seemed to extend into this room. Among the burnt tumble three types of pottery were found; white glazed, dark green glazed and Bellarmine.

There were no valuable objects in the remains of the building, which suggests that everything capable of being salvaged was removed soon after the fire and before the final collapse of the building. Buttresses to the now demolished flint wall on the east side of the roadway flanking the churchyard and the new hall contained Tudor bricks similar to those seen in the remains of the Parsonage House.

The Parsonage House site, therefore, presents a Sussex cottage for which a definite *terminus ante quem* of construction and occupation is known. The earliest date of the building cannot easily be fixed and it is not certain that it is all of one period; the cellar and chimney may be 16th century improvements to an existing building. The number of hearths recorded suggests that part, if not all, had an upper story, while the difference in construction between the solid flint east wall of the north wing and the timbering on a flint base of the south wing lends weight to the theory of a building of two periods. The roof is most likely to have been covered with thatch, as traces of this material were noticed in the burnt layer, while tiles and Horsham stone may have surrounded the chimney stack. Another place for the use of tiles or Horsham stone in a predominantly thatched roof would be in a valley.

THE FINDS

Finds described but not illustrated are numbered in Roman figures. Except where otherwise recorded the geological specimens were examined at the Geological Survey and Museum by Mrs. J. Morey and Miss H. Macdonald to whom thanks are due. Mortar, clay samples, the mould, linen smoothers and metal objects were

submitted to Mr. L. Biek of the Ministry of Public Building and Works Ancient Monuments Laboratory. Cleaning and treatment to prevent deterioration where necessary was given, X-ray photographs taken and reports were prepared under Mr. Biek's direction. For this assistance I am most grateful. Technical reports by the above named are printed in italics. Finds have been deposited at the Museum of the Sussex Archaeological Society, Barbican House, Lewes. (Most of the schist whetstones and the linen smoothers were smashed during postal transit).

POTTERY by A. E. Smith and J. G. Hurst. (With a note on the 'face' sherd, no. 231, by G. C. Dunning).

Coarse pottery was abundant on the site with some finer jugs and bowls. A period of occupation ranging from *c.* 1150 to *c.* 1450 seemed to be indicated. Cooking-pots, bowls and storage jars predominated. The latest sherds found, with the exception of those from the Parsonage House, were of imported Flemish stoneware of a date not later than 1450.

The shallowness of the soil covering the solid chalk on which the houses were built probably explains why so much of the pottery found was fragmentary. It was possible to reconstruct only three complete profiles:

- (i) a large pitcher, no. 189 from Building 1.
- (ii) a strapped storage jar or cooking-pot of *c.* 1250-1300 from building 5, no. 26.
- (iii) a cooking-pot from Building 3, no. 27.

The pottery showed a wide variety of fabrics and forms. If there was a characteristic rim it was a well formed one with a slight internal bead, a slightly concave or flat top, and a rounded outer edge. The ware was seldom fully oxidised: some contained much flint or shell: some was sandy or gritty. In colour the wares ranged from grey through browns and buffs to red. While most of the pots were wheel-thrown there were signs that some of the larger vessels were hand-made and subsequently trimmed on a slow wheel.

No attempt has been made to determine the proportion of glazed ware because of, (a) the difficulty of deciding whether or not those sherds spotted with glaze should be regarded as 'glazed,' and (b) the inevitable unreliability of any numerical estimate since it must depend upon the number of pieces into which the original articles had been broken.

Decoration of the coarse wares was limited to incised lines running round the necks of jars and pots and to applied strapping.

Coarse Wares (Figs. 17-23)

(a) A very rough red ware with flint, incompletely oxidised, probably 12th century. (Fig. 17)

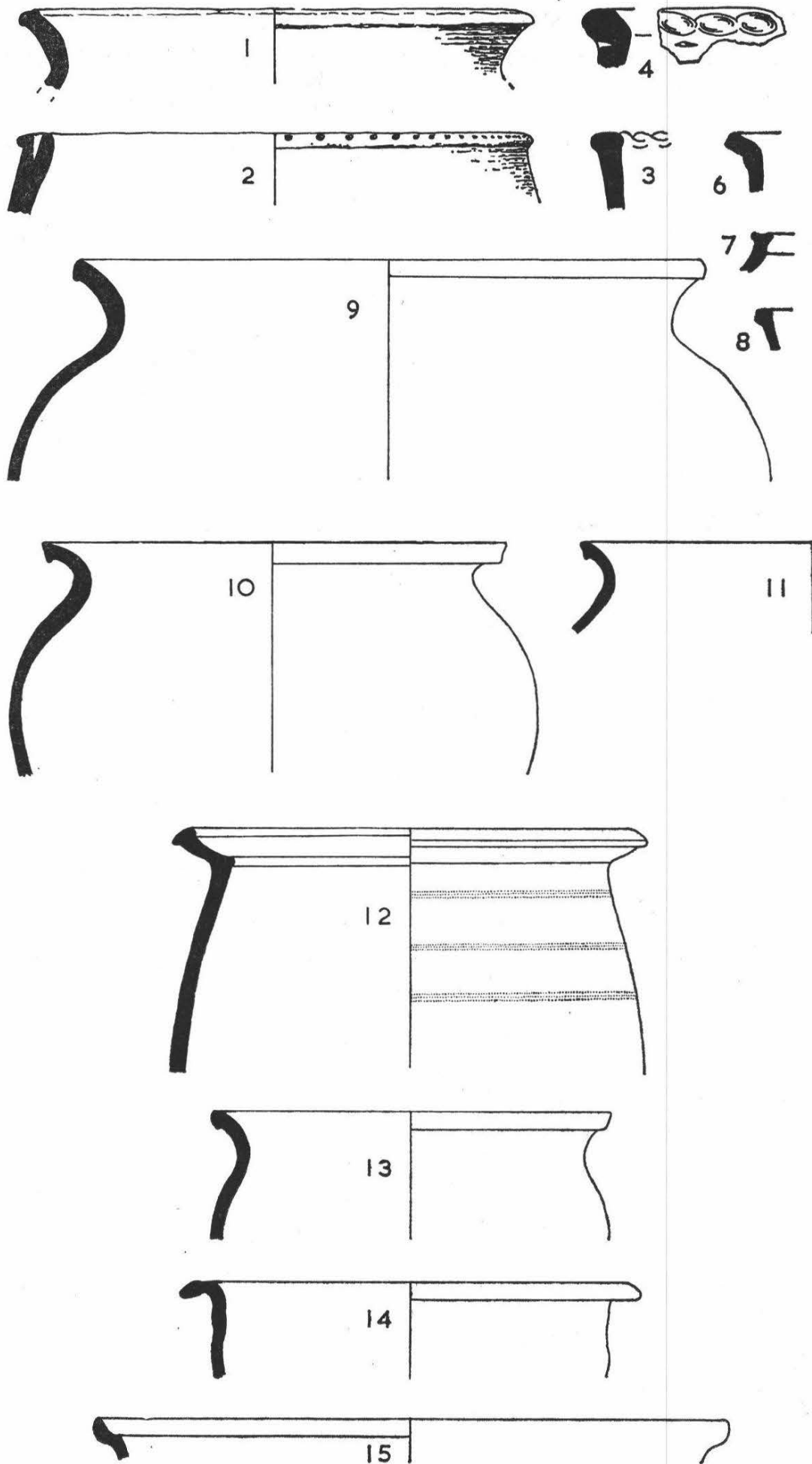


FIG. 17. POTTERY. SERIES (a) 1-8, (b) 9-15 (¼).

1. Rim of large jar: much worn, but possibly with rounded top and internal bead. Compare with early-12th century cooking-pots from Balsdean, near Brighton, *S.A.C.*, XCI (1953), p. 67, fig. 8, nos. 1 and 2. From early ditch west of Building 1.
2. Rim of jar: flat top, deeply pricked (0.6ins.): badly worn. From road metalling of Track 2, near palisade.
3. Rim: badly worn but probably roughly thumbed on top. The sherd could be part of an everted rim. Cf. *S.A.C.*, XCI (1953), p. 155, fig. 8, no. 3, from Chichester; but compare with the bowls in same fig., nos. 2 and 3, also fig. 12, no. 1. Found over northern palisade line.
4. Rim: flattened top thumbed with clear nail prints: much worn. From palisade line near Building 8.
5. This number has been omitted.
6. Rim in rough very flinty red ware: slightly concave on top: rounded edge: sharp turn outwards at neck. From northern palisade line.
7. Rim of small jar: concave top: neck grooved inside, turning sharply out at shoulder. Found with no. 1.
8. Rim of very small pan: irregular flattened top and outer edge: beaded below. From N.E. corner of palisade.

(b) A heavy coarse red ware with grey laminated core containing much flint grit. The surface rough and pitted: the rims strongly everted: probably large cooking-pots of *c.* 1200-1250. (Figs. 17, 18)

9. Concave top to rounded, slightly convex outer edge: irregular beading at junction with neck. From layer 1, Pit E.
10. Top slightly concave: edge turning sharply down and in: clearly-marked junction with neck. From layer 1, Pit E.
11. Rounded edge turning sharply and flattening in and down, returning to well-marked junction with neck. From layer 1, Pit E.
12. Irregular internal bead: slightly concave to heavy irregular bead at edge, turning down to sharp edge and slightly convex underside: shaped to hold lid. From layer 3, Pit E.
13. Convex to round edge: flat side turning sharply under to join curve of neck. From layer 1, Pit E.
14. Concave top turning down and flattening to well-rounded outer lower edge. From road metalling of Track 2, near palisade.
15. Well-marked internal bead: concave top: rounded outer edge. From Pit F, Building 5.
16. Slight internal bead: concave rising top: round edge: neck turns sharply to shoulder. From Pit F, Building 5.

(c) A rough brown-grey to dark grey ware, some with flint, but with a smoother surface than (b), the basal angles showing signs of fingering. Mid-13th century. (Fig. 18)

17. Cooking-pot: flaky brown core with flint. Built into flint wall of Building 3.
18. Cooking-pot base; probably sagged slightly. Found as for no. 17.
19. Base of cooking-pot: irregular bead outside at junction of wall and base. From base of east wall outside Building 3.
20. Rim of cooking-pot: slightly concave irregular top: round edge: short neck. Found as for no. 19.
21. Rim of small pot: pronounced internal bead: flat top and side. From layer 3, Pit E.
22. Rim: concave top: rounded edge and side. From topsoil E. of Building 3.
23. Rim of small pot: rounded edge, slightly ridged. From floor of Building 3.

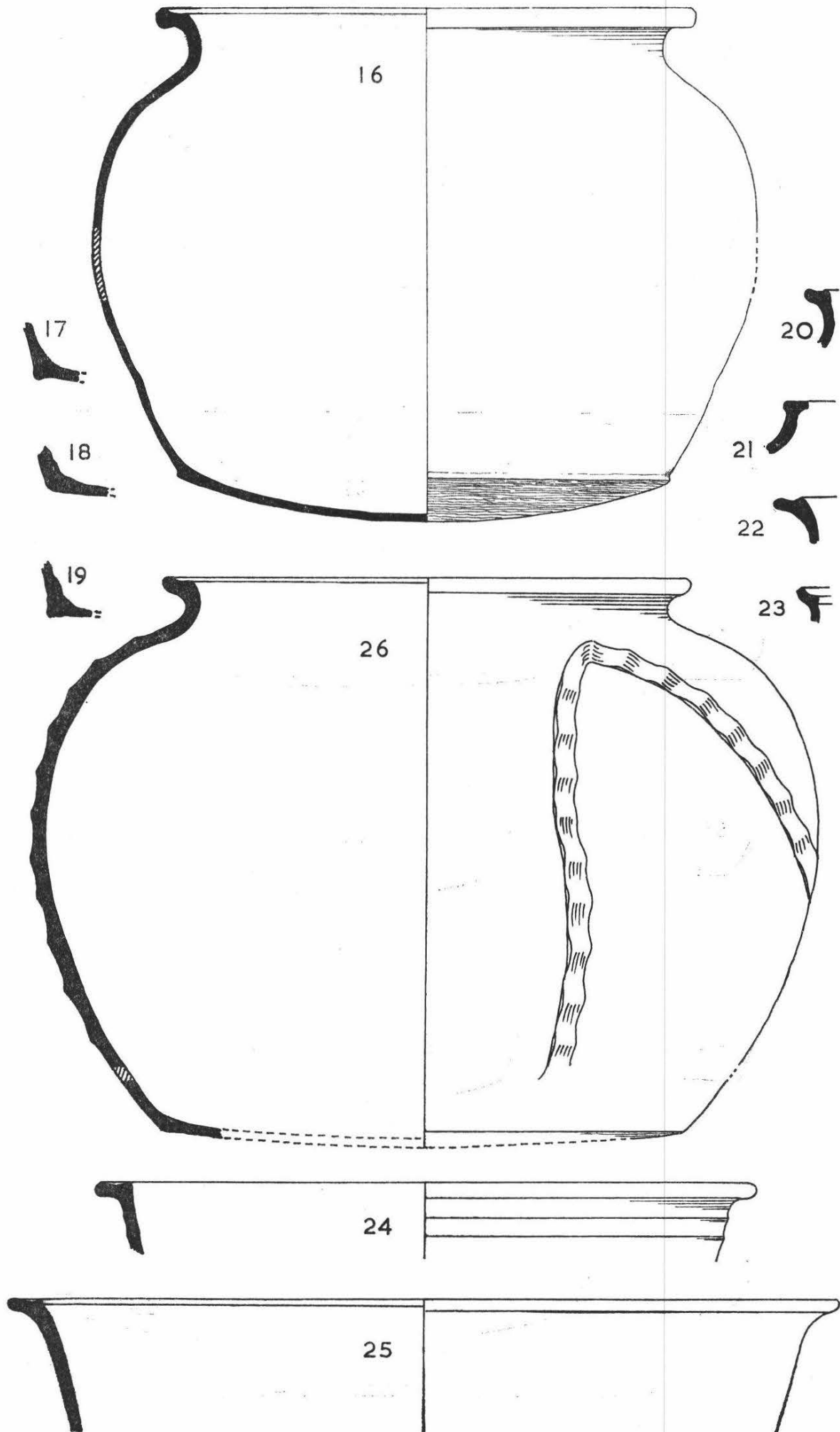


FIG. 18. POTTERY. SERIES (b) 16, (c) 17-26 (‡).

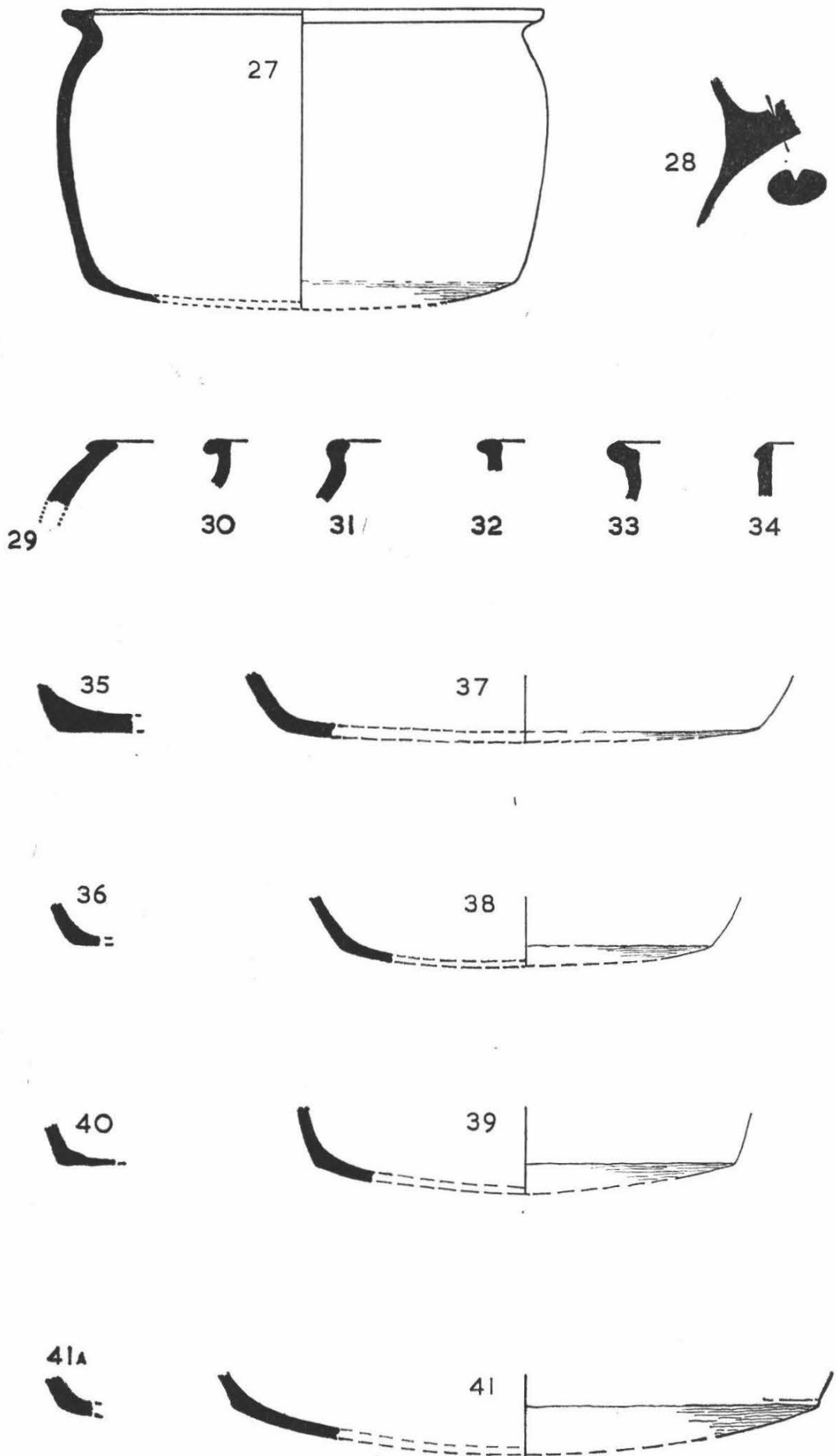


FIG. 19. POTTERY. SERIES (d) 27-41A (4).

24. Near-black ware with dull 'shine' outside: dark grey core with some flint or shell: wide shallow groove on top: well-rounded irregular outside edge: ridging on wall. From base of E. wall outside Building 3.

25. Rim of pan: internal bead: concave top: rounded edge and side: roughly ridged inclined return to wall. Found outside of E. wall of Building 3.

26. Brown-grey storage jar or cooking-pot: internal bead to rim: slightly concave top: well-rounded edge: very short neck: vertical and diagonal strap decoration. From Pit F, Building 5.

(d) A cooking-pot ware, smoke-blackened brown outside, red-brown inside, with a grey core containing some flint: *c.* 1200-1250. (Fig. 19)

27. Profile of cooking-pot: prominent internal bead to rim, with flattened top and well-rounded edge: very short neck: sagging base. From the annexe to Building 3. The rim and neck are similar to a cooking-pot from Bramble Bottom, Eastbourne, *S.A.C.*, XCIII (1955), p. 164, fig. 5, no. 5.

28. Fragment of wall and handle of jug (?): stabbed handle, pushed through wall in fixing. From base of E. wall outside Building 3.

29. Rim of globular jar: flat top: rounded edges: no neck. From inside of palisade area near N.E. corner.

30. Rim with flat top turning down to beaded edge. From outside of E. wall of Building 3.

31. Rim with rounded top: concave inside: well-marked junction with neck. Found in upcast from sewer trench in Field 7.

32. Rim of small pot: very slightly convex top. From S.W. of Building 1.

33. Rim with concave top rising to well-rounded edge. From Building 1.

34. Rim with internal bead: flat top rising to rounded edge. From Building 1.

35, 36, 37. Bases of cooking-pots: too small to decide how far, if at all, these sagged. From palisade line by Track 2.

38. Sagging base of cooking-pot. Below flint wall of Building 1.

39. Heavy, slightly sagging base of cooking-pot. It may be the base to sherd no. 10. From layer 3, Pit E.

40. Base of cooking-pot roughly finished inside. From outside of E. wall, Building 3.

41. Base of cooking-pot with slight beading at junction of wall and base. From layer 1, Pit E.

41a. Fragment of base of cooking-pot from the same layer as no. 41, grey inside instead of red. The base sags and the external angle is very well rounded.

(e) A gritty-surfaced ware with a grey core and fine flint, varying in colour from pinkish-buff to light brown buff. Probably *c.* 1250-1300. (Fig. 20)

42. Rim of large cooking-pot: light brown buff: flat top: broad ridge on shoulder. From annexe to Building 3.

43. Rim of cooking pot: brown ware: sharp inside edge: flat top: very slight ridging on neck. From topsoil above earlier ditch, S.W. of Building 1.

44. Rim of storage jar: brownish-buff: flat top: much worn underside: short neck. From Building 1.

45. Rim of cooking-pot: pinkish-buff: shallow concave top, lightly pricked: splashes of green glaze below rim outside. Between north wall and chalk scarp outside Building 1.

46. Rim of large cooking-pot, pink-buff ware: pricked flat top: beaded outer edge: wall pricked and ridged. From topsoil near palisade, E. of Building 3.

47. Buff ware: flat top: well-rounded edge. From Building 8.

48. Pink-buff ware: slight internal bead: pricked flat top. From palisade line E. of Building 8.

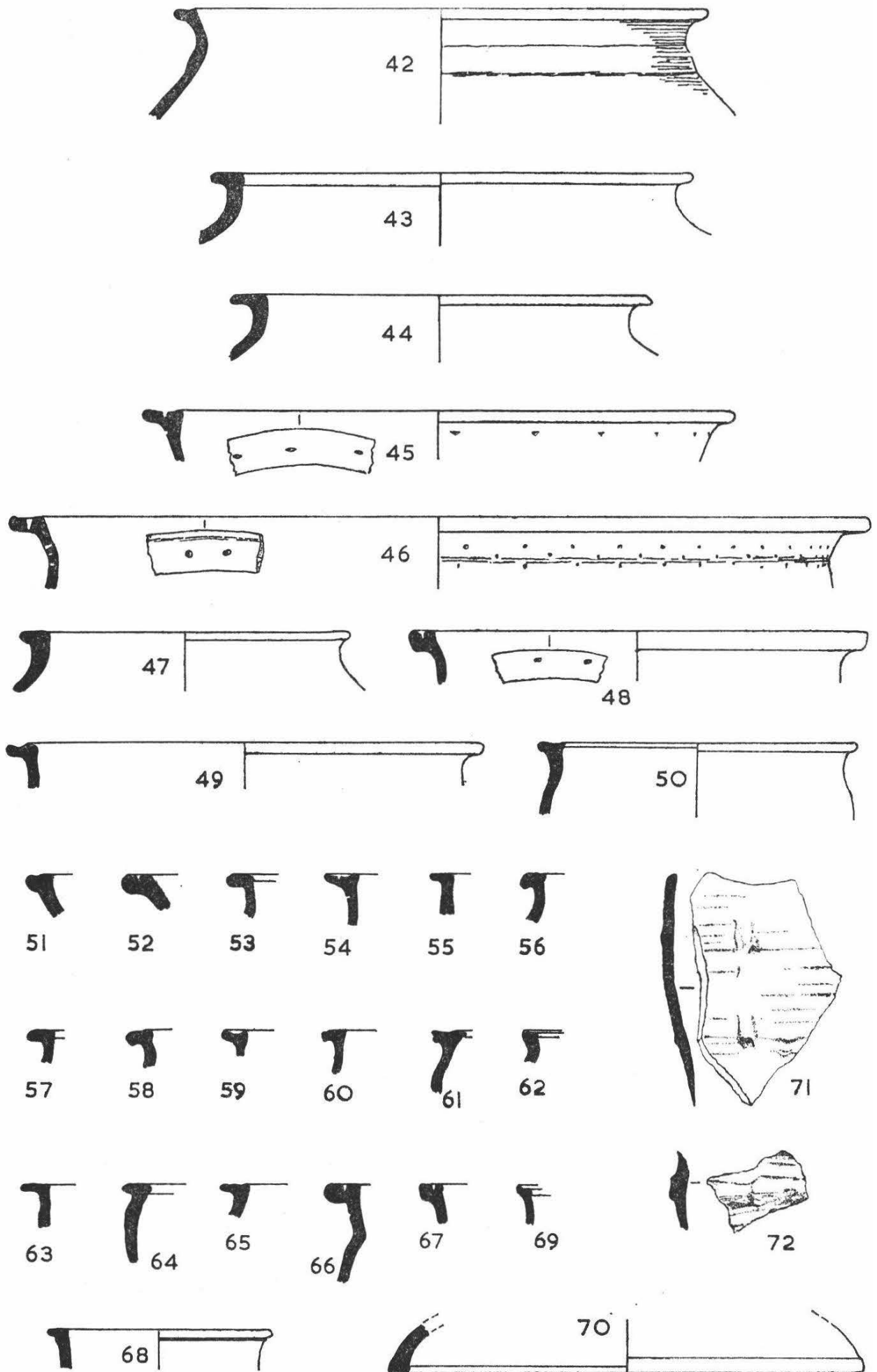


FIG. 20. POTTERY. SERIES (e) 42-72 ($\frac{1}{4}$).

49. Brown-buff ware: slight internal bead: beaded edge: flattened return to wall. From inside of palisade area near N.E. corner.

50. Brown-buff ware: internal bead: slightly concave top: rounded edge. Found as for no. 45.

51. Rim of bowl (?) in pink-buff ware: prominent internal bead: shallow groove on top: well-rounded edge: clearly marked junction with neck. From Building 1.

52. Rim of pan: mottled buff ware: pricked flat top: full rounded outer edge. Surface find on golf green W. of Building 3.

53. Rim of small jar: brown-buff ware: internal bead: flat top: rounded edge returning horizontally to wall. From topsoil above N.E. corner of Building 3.

54. Rim of cooking-pot: brown-buff ware: slight internal bead: pricked concave top: beaded edge: flattened return to wall, which is also pricked. Found with no. 53.

55. Rim of small ?: brown-buff ware, sooted outside: flat top: flattened underside. From layer below topsoil by N.E. corner of Building 3.

56. Rim of small jar: pinkish-brown ware: slightly convex top with central ridge: beaded lower edge: short neck. From base of E. wall outside Building 3.

57. Rim of small ?: pinkish-buff ware: flat top: rounded edge: flattened underside. From floor of Building 3.

58. Rim of small ?: pink-buff ware: rough internal bead: top flat, turning over and down to flattened underside and concave neck. Found between Building 8 and palisade in topsoil.

59. Rim of small pot: pink-buff ware: marked concave top: beaded edge. Found as for no. 58.

60. Rim in brown-buff ware: well-marked convex central ridge on top: flattened outer edge and underside. Found as for no. 58, below topsoil.

61. Rim of cooking-pot: pronounced internal bead: concave top: ridged edge: wall ridged externally. Found as for no. 60.

62. Rim of small ?: buff ware: sooted outside: internal bead, rising to rounded edge turning sharply back and down. Found as for no. 49.

63. Similar to 54. From metalling of Track 2.

64. Rim of cooking-pot: reddish-brown ware: irregular internal bead: flat top: rounded edge turning sharply to wall: irregular outside surface. Found as no. 63.

65. Rim of small jar in pink-buff ware: shallow concave top with slight central ridge: rounded edge. From Building 1.

66. Rim of cooking-pot: pink ware: pricked flat top: neck pricked: ridge at junction of neck and shoulder. Built into flint wall of Building 3.

67. Rim of small jar or pan: buff ware: pricked flat top with internal bead. From Building 8.

68. Rim of small jar: pinkish-buff ware: rounded inner and outer edges: flat top. From trial trench S.W. of Building 1.

69. Rim of small jar in buff ware: sooted outside: internal bead: concave top rising to rounded outer edge. From palisade line N. of Building 3.

70. Brown-buff ware lid: broad internal bead: slightly concave top rising to edge turning sharply down, then slightly convex to defined junction with wall: sooted outside. Found as for no. 69.

71. Fragment of wall of large jar: buff ware: faint vertical strap decoration: irregular horizontal scorings and ridging. From Building 4.

72. Fragment of neck of jar: buff ware: horizontal strap decoration below neck: two vertical runs of glaze inside. From topsoil E. of Building 3 with spindle whorl (fig. 35, 8).

(f) A red ware with a smoother surface and harder fired than (b) and (e), a grey core, often pricked to prevent breakage in firing: c. 1250-1300. (Fig. 21)

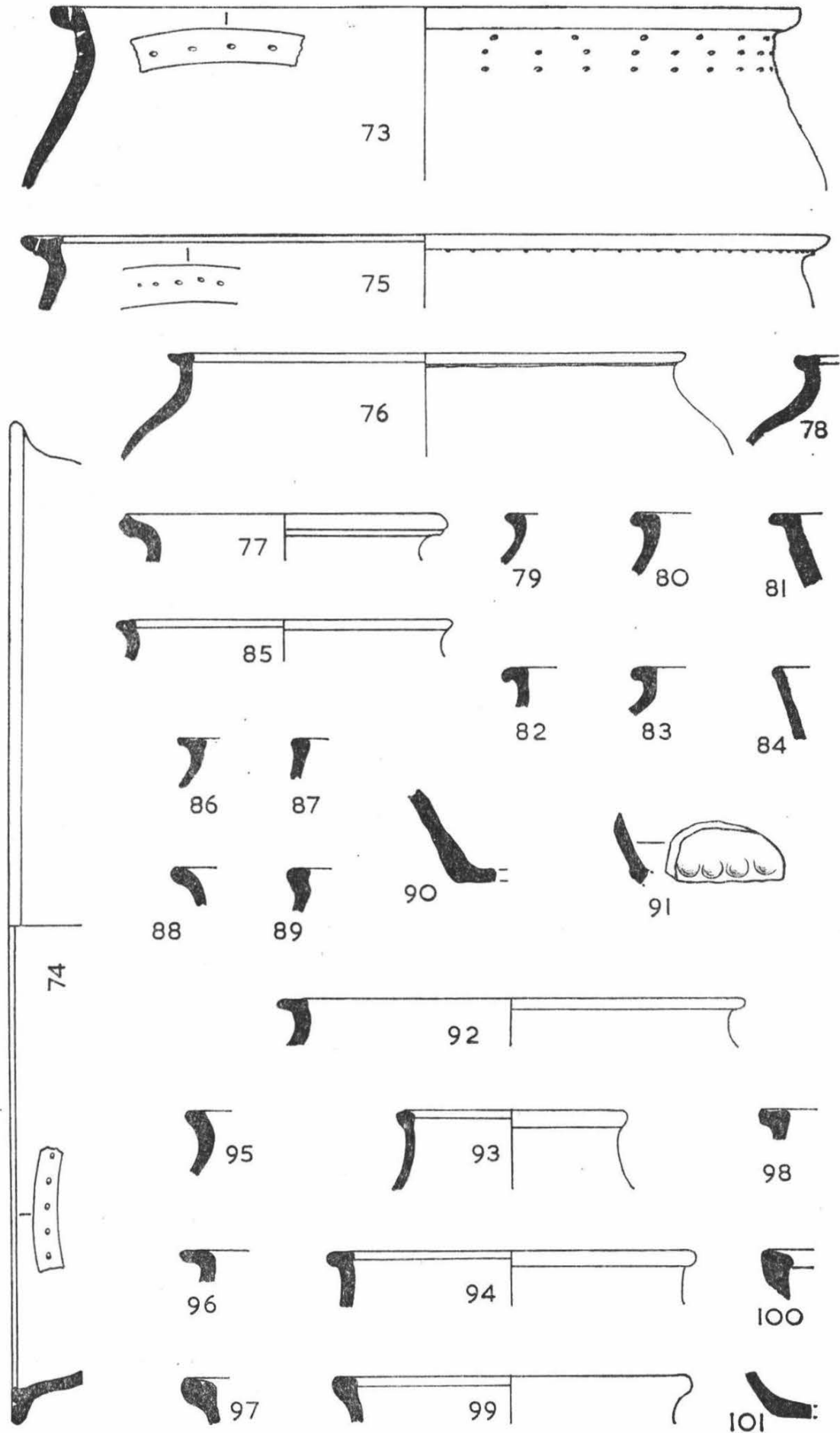


FIG. 21. POTTERY. SERIES (f) 73-91 (g) 92-101 (‡).

73. Rim of large jar: slight internal bead: flat top: rounded edge: top of rim and neck stabbed. From sewer trench, Field 7.
74. Rim of pan: well-defined internal bead: flat top, closely pricked: slightly flattened outer edge. From metalling of Track 2.
75. Rim of jar: internal bead: concave top: full rounded edge: top deeply and closely pricked, prickings showing on underside of rim as rounded protrusions of clay. From Building 1.
76. Rim and neck of storage jar: concave top with central ridge: rounded edge: ridged underside: short neck. Found as for no. 58.
77. Everted rim of jar with beaded outer edge: flattened side. Found as for no. 72.
78. Rim of globular jar: very slightly concave top: flattish edge: short neck. From outside E. wall of Building 3.
79. Rim of small jar: flat, poorly finished top: rounded edge: From annexe to Building 3.
80. Rim of small jar in gritty red ware: slightly concave top: rounded edge. From Building 8.
81. Rim of pan: internal bead: flat top: outside edge much worn: ridging on outside of short neck. From palisade line north of Building 3.
82. Rim of small jar: flat top, turning over to beaded edge: very short neck. From palisade posthole E. of Building 8.
83. Rim of small jar: internal bead: flat top, rounding to flattened underside: very short neck. Found as for no. 81.
84. Rim of small bowl: rounded top. From Building 1.
85. Rim of small jar: flat top: rounded edge. From Building 1.
86. Rim of small jar: slightly concave top: thin rounded edge. Found as for no. 81.
87. Rim of small jar: flat top: rounded edge. Found as for no. 72.
88. Rim of small jar: rounded top slightly flattened. From Building 8.
89. Rim of small jar: near-flat top: convex return to well-defined junction with wall. From Building 1.
90. Fragment of base and wall of pot, smoke-blackened inside and out: base sags. From palisade line as for no. 81.
91. Fragment of thumbed wall and base: base probably sagged: nail prints show in thumbings. Found with no. 90.

(g) A distinctive gritty ware, more completely fired than (a) to (e), varying in colour from grey to light buff. Possibly *c.* 1300-1350. (Fig. 21)

92. Rim of storage jar (?): flat top: well rounded edge: short neck: mottled grey. From metalling of Track 2.
93. Rim and neck of jar in pinkish-buff ware: flat top: round edge. From palisade line.
94. Rim in buff ware: flat top with very slight central bead: rounded edge: some flint or shell. From metalling of Track 2.
95. Rim in grey ware: flat top: edge much worn. From topsoil above Building 3.
96. Rim in buff ware: flat top: flattened return to concave neck. From golf green W. of Building 8.
97. Rim in grey-buff ware: flat top with shallow prickings: well-rounded side. From inside of palisade line.
98. Rim of small pot in grey ware: flat top: rounded edge turning back and in to very short concave neck. From Pit B, near Building 8.
99. Rim in buff ware: flat top: rounded edge. From Building 1.
100. Heavy rim in brown-buff ware: slightly convex top with internal bead: flattened side. From palisade line.
101. Base of pot in mottled grey ware. From palisade line.

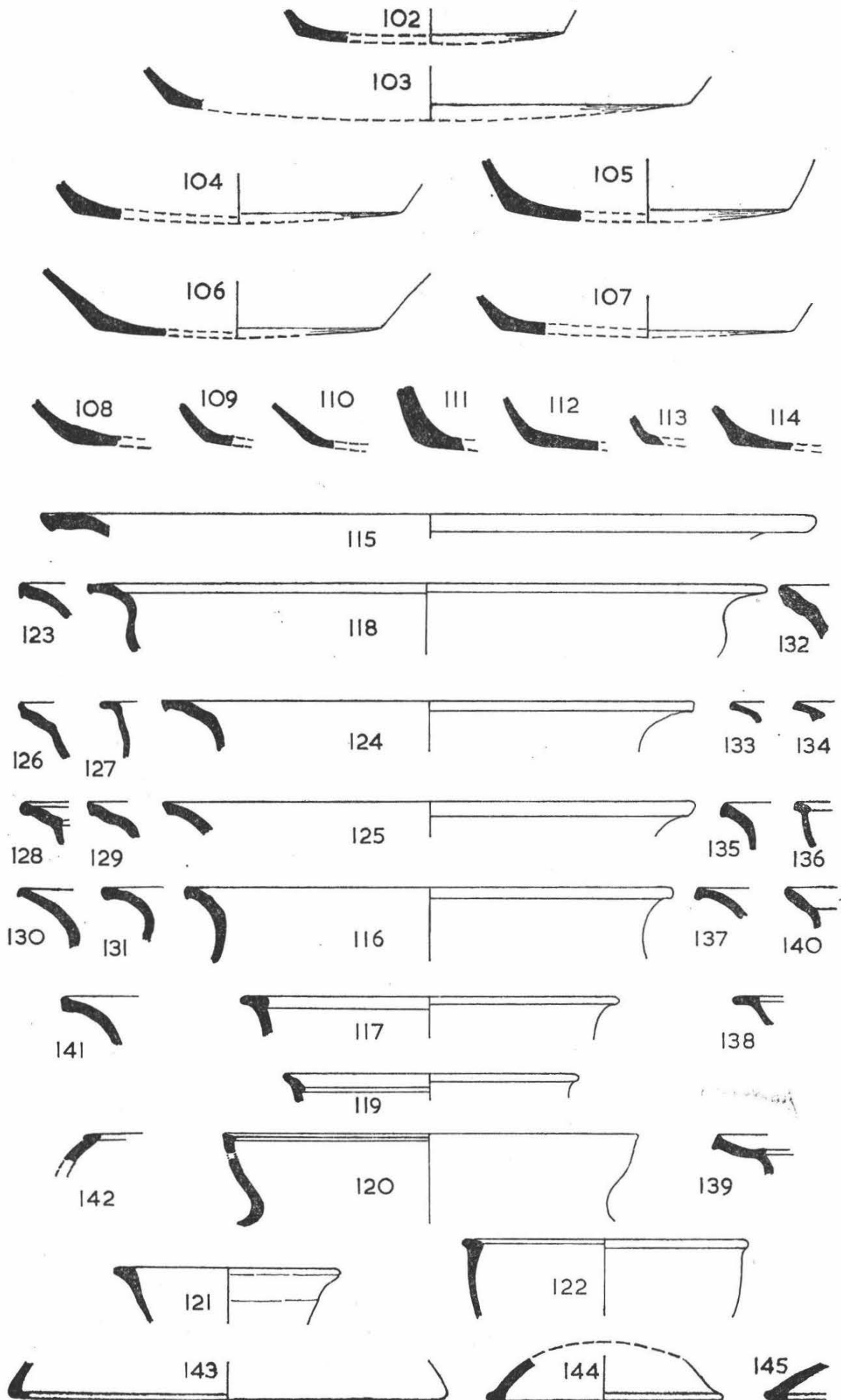


FIG. 22. POTTERY. SERIES (h) 102-114, (i) 115-145 (‡).

(h) A grey-brown ware, generally fired through, with a green glaze on the inside of the sagging base and lower wall: basal angles sharp and well defined, some with extensive knife trimming: no flint or shell. Probably *c.* 1275-1325. (Fig. 22)

102-114. These vary only in the thickness and extent of the glazing, which is the better quality and more extensive in nos. 103, 106, 108 and 112. No. 111 has spots of glaze only. Nos. 105, 110 and 111 are pink inside. Cf. cooking-pot with similar internal glaze extending 1½ ins. up the walls from Bargham, *S.A.C.*, XCIX (1961), pl. ix. Building 5 also yielded internally glazed base sherds similar to no. 106.

102. From topsoil above Building 3. Owing to sloping ground, sherds could have been washed down from outside the building after its decay.

103, 107, 109, 112. On or near palisade line E. of Buildings 3 and 8.

104. Found in palisade posthole E. of Building 8.

111, 113. From outside of Building 3.

110. From bottom of Pit D, S.E. of Building 8.

105, 108. From Building 1.

106. From Building 2.

114. From metalling, Track 2.

(i) A fine, thin ware: the rims strongly everted, with simple round or squared edges. *c.* 1275-1325. (Fig. 22)

This general description applies to the following, which, apart from minor variations of size, ridging, etc., vary only in colour.

Pink-buff ware

115. From trial trenches W. of Building 1.

116. From outside of E. wall, Building 8.

123, 127. From palisade line N. of Building 3.

129, 141. From Building 8.

130. From golf green W. of Building 8.

131, 133, 135. From outside of Building 3.

Brown-buff ware

118. From golf green W. of Building 8.

124, 140. From trial trenches W. of Building 1.

125. From Building 1.

126, 128, 137. From palisade line N. of Building 3.

132. From sewer trench, Field 7.

134, 138. From metalling, Track 2.

The following do not follow the general form.

117. Rim of pan in buff ware: flat top: bevelled edge. From Building 1.

119. Rim of small jar: internal bead, flattening and rising to slightly convex top: one small spot of glaze outside. From the hollow above the hearth, Building 8.

120. Rim, neck and shoulder of cooking-pot in pink-buff ware: flat top: inside of neck concave, then convex before turning very sharply to near-horizontal shoulder: neck pierced for suspension: yellow-green glaze inside and outside above shoulder. Found between Building 3 and palisade.

121. Rim of small jar in grey-buff ware: flat top: small spots of glaze outside. Found near Building 4.

122. Rim and wall of small bowl: brown-buff ware: slightly convex top: well-rounded inner edge: outer edge much worn. Found outside of Building 3.

136. Rim of small bowl: brown-buff ware: internal bead: strongly convex top: beaded outer edge. From near palisade line.

139. Rim of pan: light buff ware: strongly concave top: flattened outside edge. From top of metalling, Track 2.

142. Rim of small pot: pink-buff ware, smoke-blackened outside: worn flat top slopes outwards and down to bead. From Building 5.

Lids of small jars

143. Light buff ware. From Building 4.
144. Pink-buff ware. From Building 4.
145. Reddish-brown ware. From golf green W. of Building 8.
- (j) Storage jars and pans in a buff or light red ware, characterised by wide, flat rims: c. 1300-1325. (Fig. 23)
146. Rim in yellow-buff ware with grey core: flat top: near rectangular in section. From Building 8.
147. Rim of jar in pink-buff ware: slightly convex-concave top: rounded edge. From tumble above oven, Building 3.
148. Rim in brown-buff ware: broad, very slightly concave top: near-rectangular in section. From Building 1.
149. Rim of jar in light red ware: flat top: well-rounded concave return to wall: incised rings on outer wall. From Building 1.
150. Rim in buff ware: wide, flat top with internal and outer beading: top pricked: ? spots of glaze below rim. From outside of E. wall, Building 3.
151. Rim in light red ware: prominent internal bead: concave top with rounded edge and well-marked junction with wall. From golf green W. of Building 8. Cf. Bramble Bottom, *op. cit.*, fig. 5, no. 11.
152. Rim and wall of pan: brick red ware, fired through: marked internal bead: near-rectangular in section: broad ridge on outside of wall marked by incised rings. From Building 1.
153. Rim in buff ware with pink-buff core: concave to inner, much worn edge: flat top with incised wave decoration: ridging on underside: rim is 'triangular' in section. From palisade line. For similar rim decoration cf. Bramble Bottom, *op. cit.*, p. 164, fig. 5, no. 7.
154. Rim, neck and wall of large globular storage jar in red-buff ware with grey core: internal neck concave to bead: flat top: rounded edge: very slight ridging on shoulder. From sewer trench 30yds. E. of Building 4.
155. Rim of small jar in light buff ware: grey core with some flint: broad internal bead: top very slightly concave to rounded outer edge. From near inside of palisade line.
156. Rim of small jar in brown-buff ware: lighter core: flat top: rounded edge: 'rectangular' in section. From palisade line.
157. Rim of pan: pink-grey ware: flat top with internal and external beading: slightly convex underside. From palisade line.
158. Rim of small jar in buff ware: well-marked internal bead: slightly ridged flat top with well-rounded outer edge. From golf green, W. of Building 8.
159. Rim of pan in light red ware with grey core: flat bevelled top: slight ridging outside on wall. From outside of E. wall, Building 3.
160. Rim of jar in light red ware, fired through: flat top. Found as for no. 159.
161. Rim of pan in red ware with grey core: broad flat top rising to well-defined beading: shallow incised wavy decoration on top. From trial trenches of Building 1. For similar rim decoration cf. Bramble Bottom, *op. cit.*, fig. 5, no. 7.
162. Similar to no. 157 but in light red ware with grey core. From W. side of Building 5.
- 162a. Rim of light red ware, grey core: internal bead: flat top: rounded edge. From Building 3.
163. Rim in a buff ware: flat top thumbed by spreading clay. Inner edge damaged, very faint traces of glaze on outside edge of rim. Found over northern palisade line.
164. Base of jar in red ware, slightly sagging, fired through: sharp basal angle: scoring on base suggests that pot was turned on the wheel when leather-hard. Found near palisade to Building 3.
165. Rim of small pot or pan: pink-brown ware: internal bead: flat top and underside: spot of glaze on wall outside. From outside of Building 3.

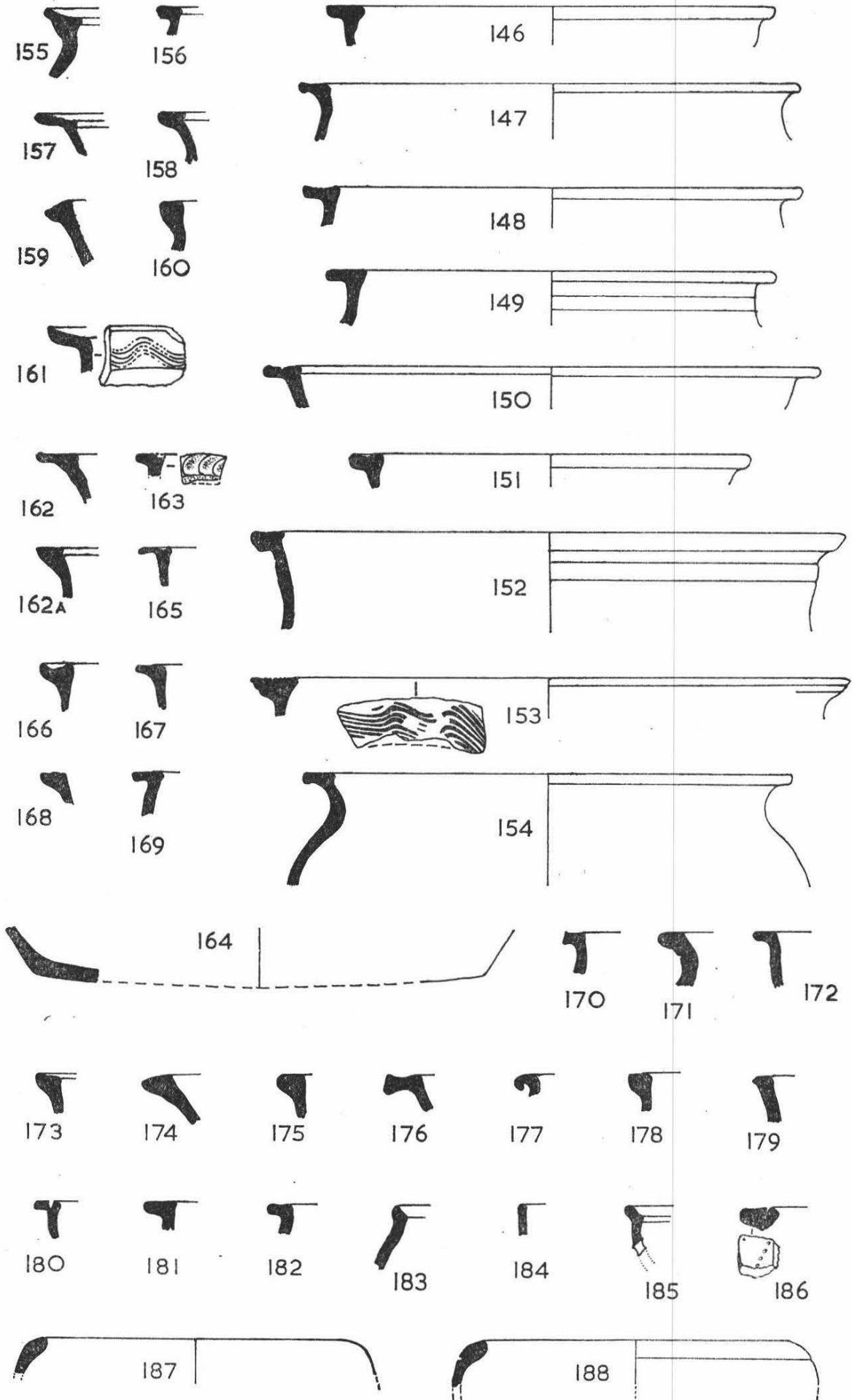


FIG. 23. POTTERY. SERIES (j) 146-172, (k) 173-188 (‡).

166. Rim of jar in light red ware with light grey core: well-marked internal bead: concave top: well-rounded edge. From outside of Building 3. The rim section is like Bramble Bottom, *op. cit.*, fig. 5, no. 11.

167. Rim of small pot: pink-buff ware: flat top. From outside of Building 3.

168. Rim of small jar in buff ware with grey core: irregular internal bead: flat top with slight central ridge: spot of glaze on underside of rim. From outside of Building 3.

169. Rim of small ?: red-brown ware: thin flat rim with flattened underside. From palisade line.

170. Rim of small jar: light red ware, grey core: slightly convex top with external beaded edge: flat side. From Building 3.

171. Rim of jar in buff ware with gritty surface and grey core: flat top and flattened side: short neck with horizontal slash on outside. Found with no. 161.

172. Rim of small jar: buff ware: light grey core: sharp inner edge: flat top: flattened outer edge with spot of glaze. From Building 2.

(k) A few small rims do not fall into any of the foregoing categories. (Fig. 23) They are:—

173. Rim of jar in dark grey ware with a grey core: internal bead: flat top: round edge: concave return to neck. From palisade line. Cf. Bramble Bottom, fig. 5, no. 4.

174. Rim of pan in a red-brown rough sandy ware with a grey core: slightly convex top: rounded edge. From golf green W. of Building 8. Cf. Bramble Bottom, fig. 5, no. 4.

175. Rim in a rough grey-brown ware with a brown core: sharp internal angle with vertical inner wall: round edge. Found as for no. 174. Cf. Bramble Bottom, fig. 5, no. 2.

176. Rim in a yellow-buff ware fired through: internal bead: slightly convex top with central groove: spots of glaze outside. Late-14th century. One sherd found on chalk floor of Building 5 joining with another sherd in the depression between postholes 2 and 3.

177. Rim of small jar in a grey-brown ware: flat top with beaded outer edge. Found outside N.E. corner of Building 8.

178. Rim in a brown-grey ware with a buff core: very slightly convex top: slightly concave side: irregular grooved junction with wall. From bottom of Pit D. Cf. Bramble Bottom, fig. 5, no. 2.

179. Rim in light brown ware, fired through: very slightly convex top: beaded edge. From outside of Building 3.

180. Rim of small jar in a thin red ware: rectangular in section: pricked: spots of glaze outside below rim. Found as for no. 179.

181. Rim of jar in a grey ware with a brown core: flat top with slight convex central ridge: rounded outer edge with flattened underside. Found as for no. 179. Cf. Bramble Bottom, fig. 5, no. 6.

182. Rim in a grey gritty ware: flat top. From palisade posthole E. of Building 8 with no. 82.

183. Rim in buff sandy ware: sooted outside: internal bead: concave top rising to rounded edge. From palisade line.

184. Rim of small jar in a grey ware with a light grey core: rounded top with spot of green glaze. From metalling, Track 2.

185. Rim of small hanging bowl in a pink ware with a light grey core: internal bead: top concave-convex: internal green glaze: wall of neck pierced for hanging. Found as for no. 174.

186. Rim in a rough grey ware with a lighter grey core: fairly sharp inner edge: flat top with prickings diagonally across it: flattened outer edge. Surface find.

187. Rim of small shallow bowl: gritty buff ware, fired through: wall turning inwards to rounded top. Found as for no. 179.

188. Rim similar to no. 187 but in a flaky brown ware: sooted outside: incised girth decoration outside. From annexe to Building 3.

Jugs (Figs. 24-26)

With the exception of no. 189 from Building 1, it was not possible to complete the profile of any of the jugs. Some 550 fragments of wall were found well glazed or spotted with glaze, together with a number of handles, necks and portions of bases. No pinched-out lips or spouts were found. The glaze was confined to the outside of the vessels.

Glaze colours varied from an olive-brown green to a deep green, suggesting that while copper was the principal constituent, some lead and some iron oxide had been used with the copper.

The unglazed ware was usually incompletely oxidised, and was heavy and crude in execution. It was found in two colours, a brick red and a yellowish-buff. The incompletely glazed ware was red with a grey core. The characteristic well-glazed ware was pink-buff to buff in colour. The better the glaze the more complete the firing.

189. Jug in pink-buff ware with a light grey core: thumbled base, sagging slightly: green glaze from neck to shoulder: neck ridged: white slip brushed decoration. The handle is conjectural. See note to nos. 222-223. Dated c. 1300, from Building 1.

Necks and Rims

Two in a buff, sandy ware, nos. 191 and 192, were unglazed. Nos. 191 and 192 were flat topped; both from Building 3. (The no. 190 has not been used).

The only substantial portion of neck, no. 193, was in a light buff ware with a grey core. The outside and the top of the rim carried a good speckled copper green glaze over a wavy incised decoration circling the neck. There is a fragment of applied decoration. This was found below the outer oven wall in Building 3. The dating is probably late-13th century. Also below this wall was a fragment of internally glazed base (not illustrated) similar to nos. 103 or 104.

The remaining neck fragments, 194-200, were partially glazed in green on the outside only, and were in a rougher light red or red-brown ware.

194. From sewer trench 30yds. E. of Building 4.

195. From inside corner of palisade N.E. of Building 3.

196. From Building 1.

197. From Building 5.

198. From palisade line N. of Building 3.

199. From golf green W. of Building 8. The rim and neck grooves are similar to fig. 1, no. 5 from Tyler Hill, near Canterbury, *Arch. Cant.*, LV (1942), dated c. 1275-1300.

200. From Building 3.

Handles

Fabrics and forms varied. With one exception, no. 202, all were pricked, stabbed or slashed to prevent breakage in firing.

Coarse Ware. The earliest examples, nos. 201 and 202, may belong to c. 1200-1250, with the remainder ranging through to c. 1350.

201. From early ditch near Building 1.

202. From outside of Building 3.

Buff Ware. 203. Flat-topped rim bevelled outwards: broad, pricked strap handle: shallow concave on top: traces of greenish-yellow glaze on underside of handle. The shape of the jug is conjectural, possibly similar to no. 189. Handle compares with one from Bramble Bottom, *op. cit.*, p. 163, fig. 3. From building site in Field 7.

204. Flat-topped rim with internal bead: strap handle, 'U' in section with central groove: deeply stabbed: thumbled edges: probably not later than c. 1250. From earlier ditch below N.W. wall of Building 1.

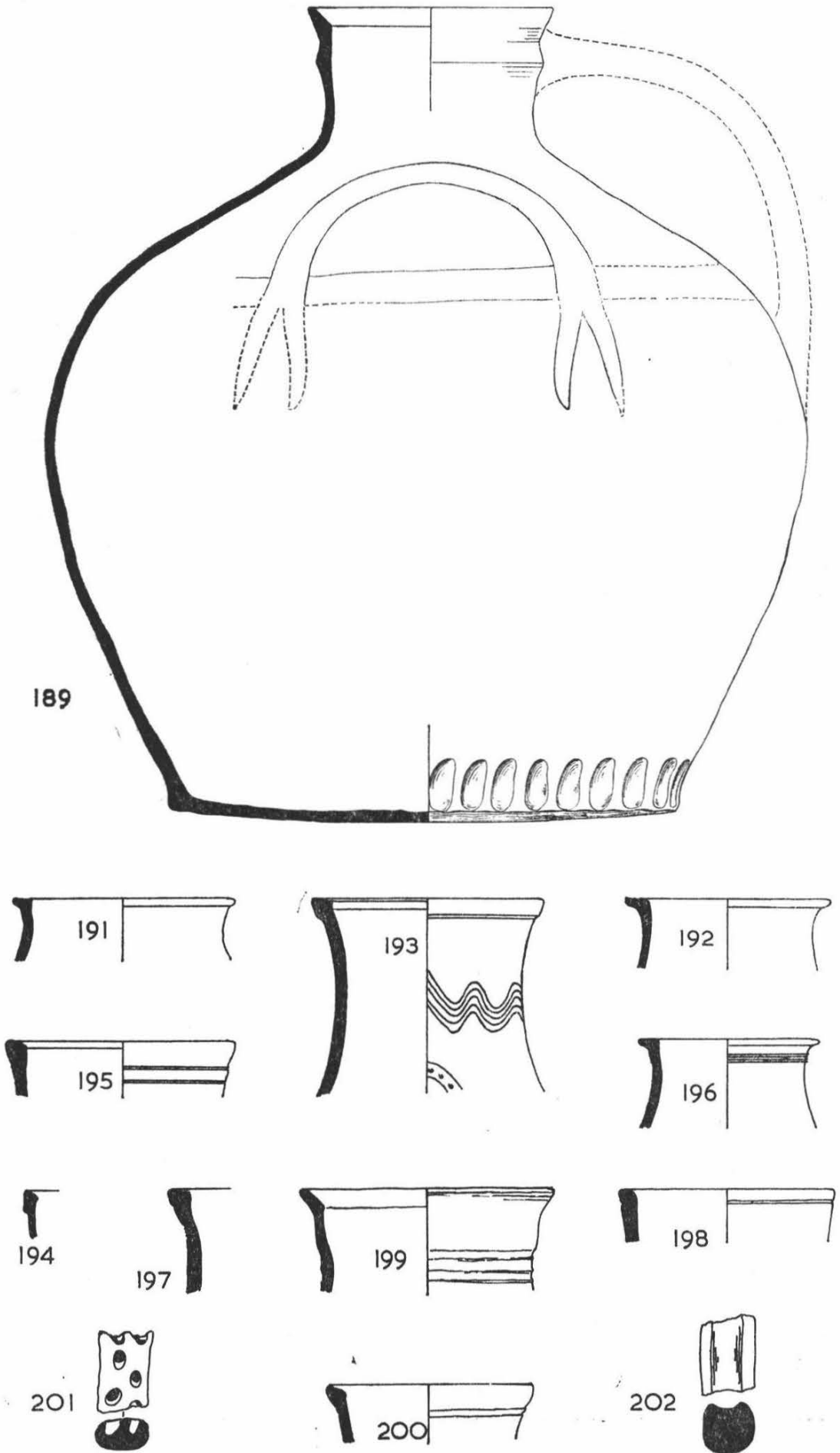


FIG. 24. POTTERY. JUGS 189-202 (±)

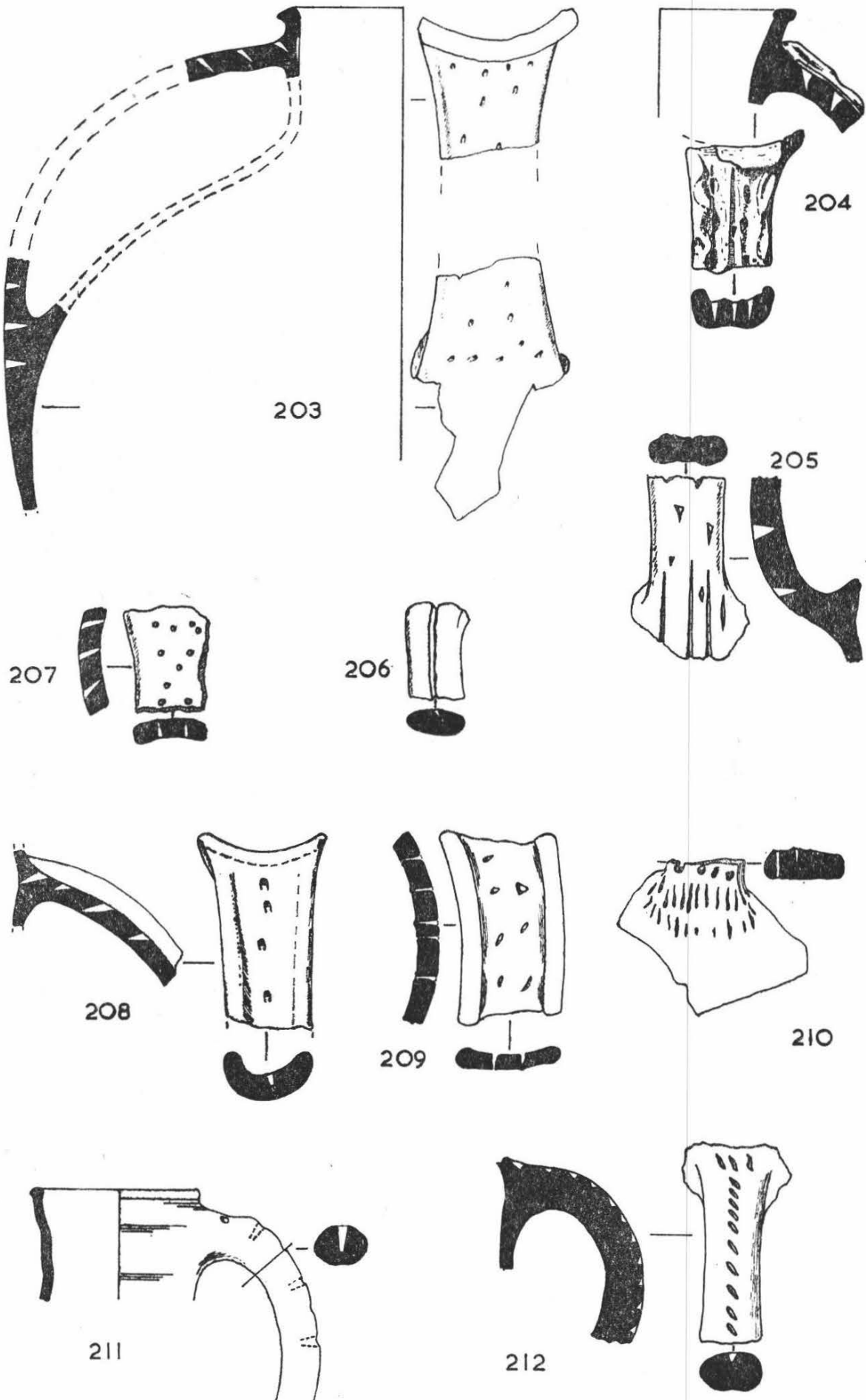


FIG. 25. POTTERY. JUGS 203-212 (¼).

205. Elliptical in section with wide central groove on top: stabbed and slashed. From bottom of Pit D.

206. Elliptical in section: continuous slashed groove on top. From depression between postholes 1 and 2, Building 5.

207. Strap handle: concave on top: pricked through. From near palisade line.

Red Ware. 208. Strap handle, deeply grooved: irregularly stabbed. From golf green W. of building 8.

209. Broad strap handle, fired through: less deeply grooved than 208: well-rounded edges: irregularly pricked. From Building 3.

210. Junction of flat strap handle with wall: slashed and stabbed: light green glaze outside. From Building 1.

211. Much-weathered fragment of neck, wall and handle: probably rounded rim, beaded outside: neck grooved: handle elliptical in section: shallow central groove on underside: regularly spaced stabs across top of handle and centrally down length: traces of dark green glaze. From N.W. corner of Building 3.

212. Elliptical in section with central groove on underside: regular slashes across the top of handle and centrally down length: traces of dark green glaze. Found as for no. 208.

Pink-Buff Ware. 213. Fragment of rim and handle: flat rim with irregular bead internally: slashed 'leaf' motifs on junction of handle and neck: light green glaze outside. From metalling of Track 2 E. of Building 8.

214. Fragment of rim and handle: slightly concave inward sloping rim with internal bead: handle elliptical in section: pricked: green glaze outside. From near bottom of Pit A, Building 8.

215. Portion of handle: near-circular in section: very lightly pricked: green glaze. From surface of metalling, Track 2.

216. Portion of neck and handle: inward sloping rim rising steeply to rounded outer edge: handle near-elliptical in section, with slightly concave upper surface: deeply slashed on top: green glaze outside. From Building 8.

217. Fragment of rim and handle: flat, inward sloping rim: handle elliptical in section: regularly pricked down length: two applied 'leaf' motifs at junction of handle and neck: gold-green glaze outside. From palisade posthole 6ft. S. of Building 8.

218. Fragment of rim and handle: flat rim sloping inwards to irregular bead: handle elliptical in section: centrally slashed: green glaze outside. From trial trench S.W. of Building 1.

219. Handle near-circular in section, pushed through wall in fixing: good green glaze. From Building 1.

220. Portion of handle near-circular in section: deeply stabbed: dark green glaze. From Building 8.

221. Portion of handle elliptical in section: deeply, but infrequently pricked: yellow-green glaze outside with traces of a dark olive-green stripe. From outside N.E. corner of Building 3.

Bases

Substantial portions of the bases of two large jugs, nos. 222 and 223, were found. These were regularly thumbbed, in a red-brown to buff ware with a few spots of glaze. The wall of no. 222 had warped in firing. Both from Building 1.

Three fragments of bases, nos. 224, 225 and 226, from smaller jugs, in a thin buff ware were more roughly thumbbed, and bore traces of a thin green glaze. All from between Building 3 and northern line of palisades.

Two fragments of bases, with a sharp basal angle, in buff ware, were unthumbbed. No. 227 from Building 1, no. 228 from Building 8. No. 228 had a slightly hollow base and there were traces of green glaze inside on the bottom.

Two, in a light grey ware, were carefully thumbbed and carried a good green glaze on the outside. No. 229 found between E. wall of Building 8 and palisade. No. 230 from palisade line N.E. of Building 3.

In all instances the thumbing was continuous and overlapping.

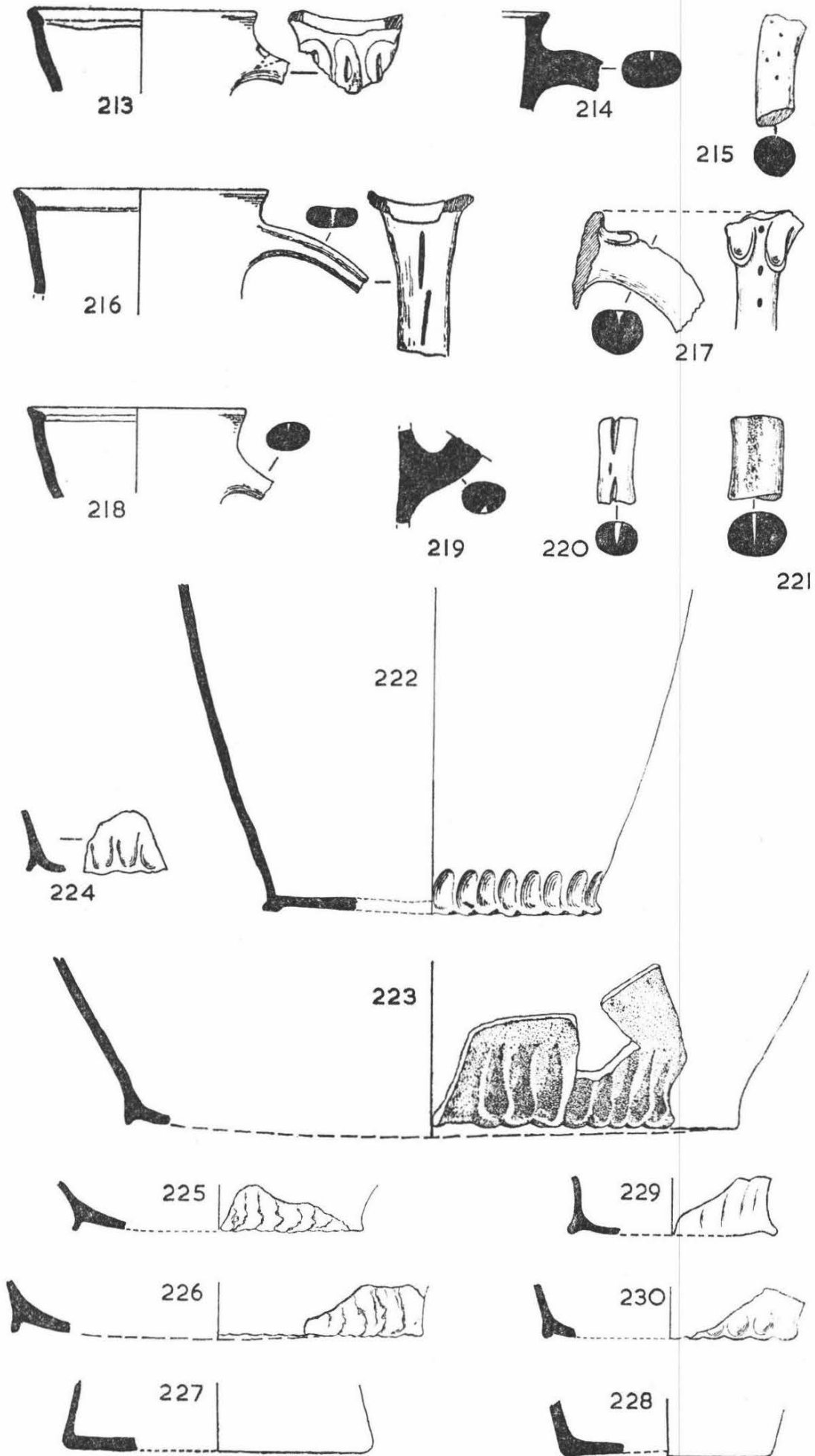


FIG. 26. POTTERY. JUGS 213-230 (4).

Body Sherds

Of 372 fragments of well glazed jug fragments, 151 bore some form of decoration: 104 had traces of incised decoration: under-glaze, brushed-on slip appeared on 13 sherds, and 15 had been decorated in relief by the application of thin moulded strips of clay. The applied decoration on nos. 233, 237 and 238 may be compared with late-13th century jugs from Jewry Wall Leicester and Coventry, *Rep. of Res. Com. Soc. of Ant.* XV (1948), figs. 70-73.

SHERD OF FACE JUG by G. C. Dunning.¹ (Fig. 27)

231. The sherd is made of whitish sandy ware with medium green glaze on the outside. The face is in high relief; the semi-circular eyebrow is an applied strip, while the eye and cheek are bosses made by pushing out the side of the pot from the inside. The eyebrow and eye are coloured differently, a dark brown, which also seems to have covered the nose.

The face is situated on the front of the neck of the jug, immediately below the rim. It may be called a 'face-on-front' jug to distinguish it from other types of face decoration, either laterally on the rim or neck, or on a bridge spout. Thus defined, examples of face-on-front jugs are known from 12 sites in a limited part of southern England. At least half a dozen examples are known from London, some of which are published.² In Kent a single example is recorded in a late-13th century context at Dover;³ this jug is, however, an importation from the Low Countries. In Sussex examples are known from the pottery kilns at Rye,⁴ from the Potters' Field at Ringmer,⁵ and from Bramber Castle,⁶ Pulborough⁷ and Chichester⁸—a total of six sites (including Hangleton) in the county. In Hampshire, three were found in the waste heap of the pottery kiln at Bentley,⁹ two fine examples were found on the site of the Black Swan Inn at Winchester,¹⁰ and at Southampton there is an example from recent excavations on the site of Quilter's Vaults in Lower High Street.¹¹ Finally, several examples have been found at the pottery kilns at Laverstock, South Wiltshire, excavated by Mr. J. W. G. Musty.¹²

¹ We are indebted to Mr. G. C. Dunning for this note.

² British Museum *Catalogue of English Pottery*, p. 72, fig. 62; Guildhall Museum *Catalogue*, p. 178, pl. lxvi, no. 5; London Museum *Med. Cat.*, p. 214, pl. lxii, no. 2. Other examples from London are in the Maidstone Museum, and in the Fitzwilliam Museum, Cambridge (Rackham, *Medieval English Pottery*, pl. 49).

³ *Arch. Cant.*, LXIX (1955), p. 140, fig. 4, no. 1.

⁴ *S.A.C.*, LXXVII (1936), p. 115, fig. 4.

⁵ *Ibid.*, XLV (1902), p. 134, fig. 8.

⁶ Brighton Museum. *Ibid.*, LXVIII (1937), p. 241.

⁷ *Ant. J.*, X (1930), p. 256, pl. xxvii.

⁸ Chichester City Museum.

⁹ British Museum. *Country Life*, 7 April, 1944.

¹⁰ Winchester City Museum.

¹¹ Information from Mr. F. A. Aberg.

¹² Salisbury and South Wilts. Museum.

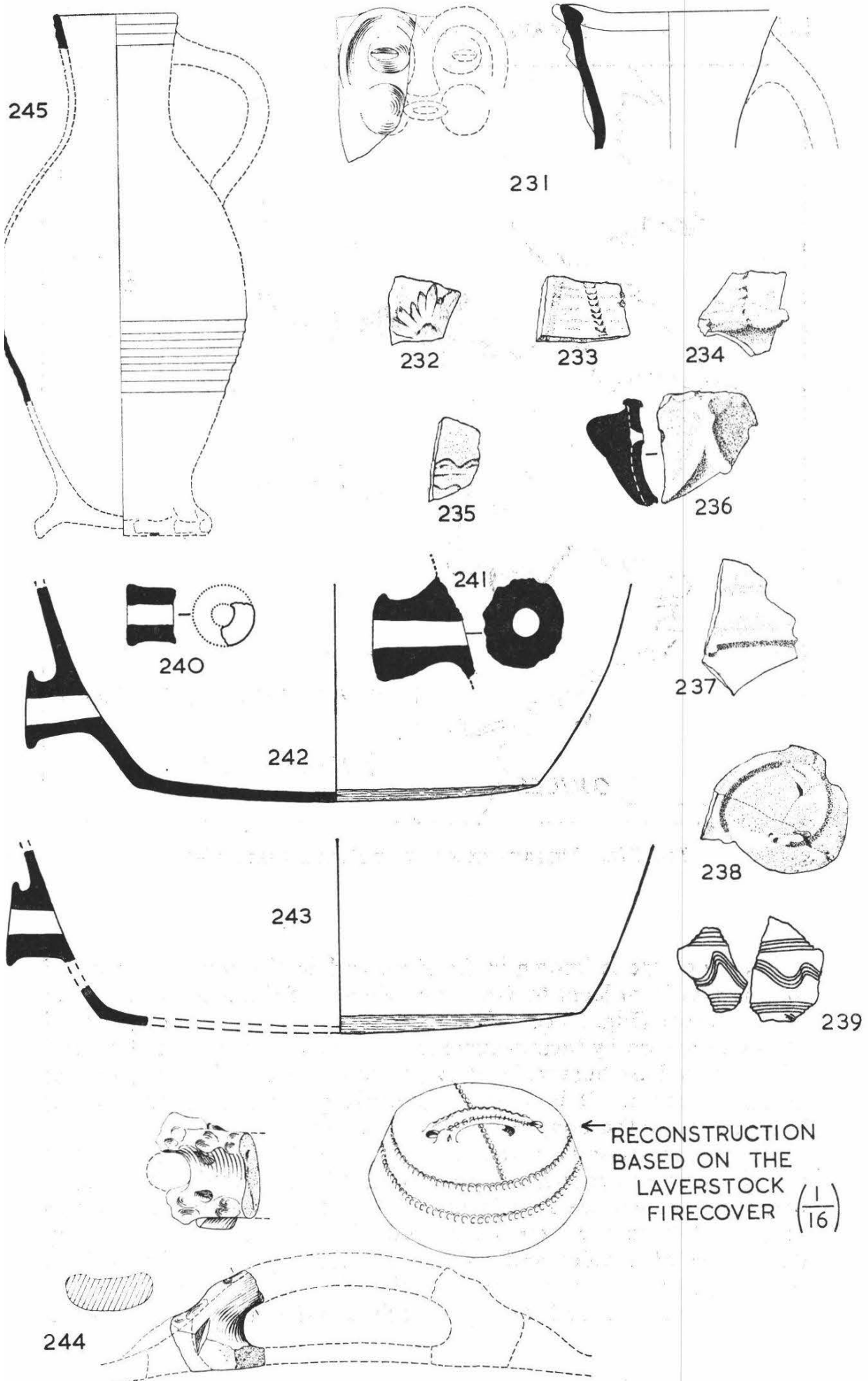


FIG. 27. POTTERY. FACE JUG 231, DECORATED SHERDS 232-239, BUNG-HOLES 240-243, FIRECOVER 244, FLEMISH STONWARE JUG 245 (1/4).

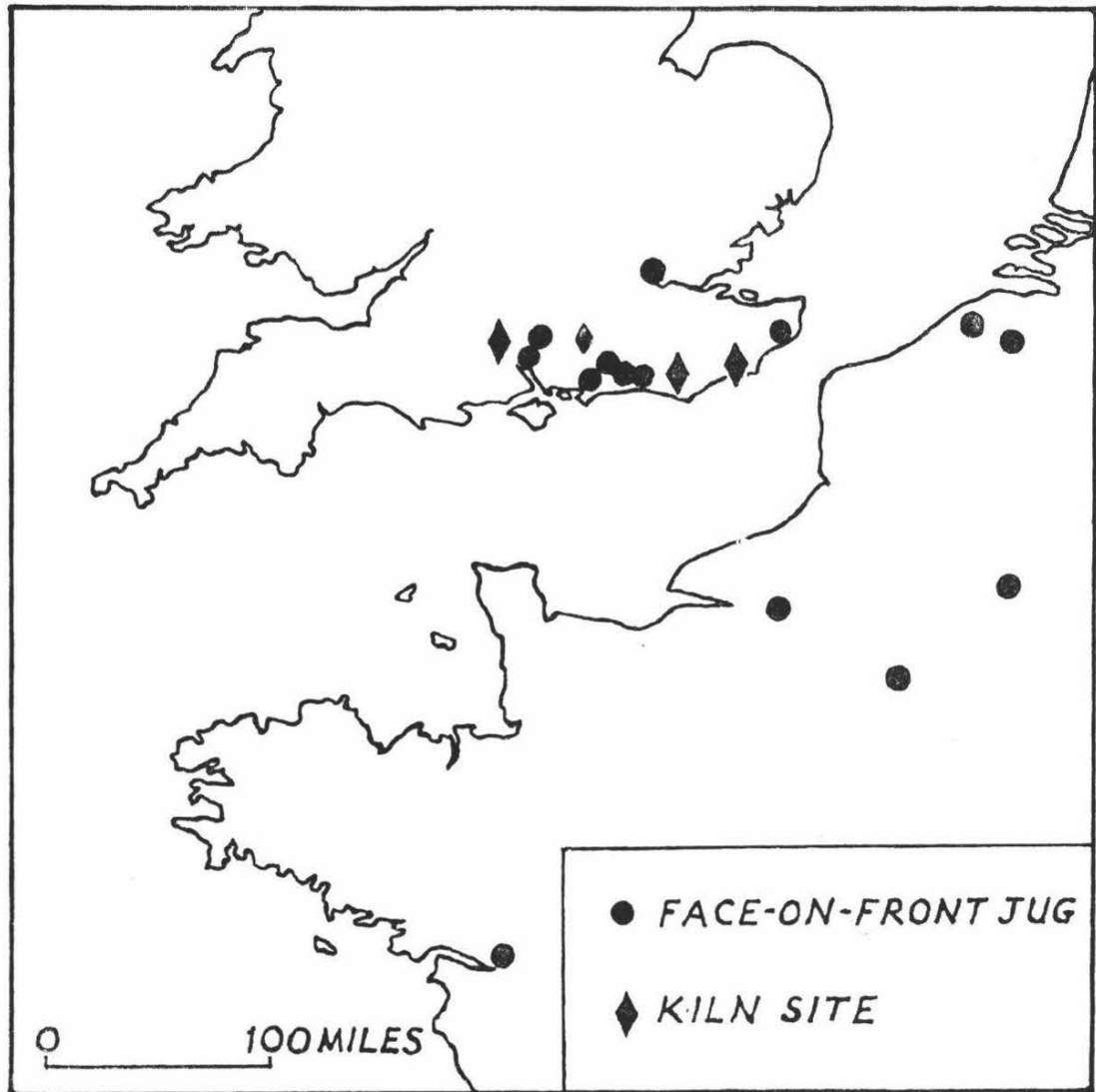


FIG. 27a. DISTRIBUTION MAP OF FACE-ON-FRONT JUGS.

Thus the type is known in London, and in the counties south of the Thames from Kent to Wiltshire, where half the sites (6 out of 12) are in Sussex (Fig. 27a). Face-on-front jugs were made at several places, as shown by their occurrence at kilns as far apart as Rye and Ringmer in East Sussex, Bentley in Hampshire and Laverstock in South Wiltshire. It is likely on stylistic grounds that yet another kiln producing these jugs existed in West Sussex.

The concentration of this type of face decoration in London and the southern counties suggests that it is probably continental in origin. Mention has already been made of the face jug at Dover as an import from the Low Countries. The fine red ware and slip decoration of arcades and rosettes on this jug distinguish it from other jugs of this group, and associate it with pottery in Holland and Belgium. Abroad, examples of face-on-front jugs are known at

Ghent¹ and Bruges² in Belgium, and at Rouen,³ Paris,⁴ Laon⁵ and Nantes⁶ in the northern parts of France. Thus the jugs occur over a wide arc of the Continent in the regions adjacent to southern England (Fig. 27a). The style of the highly arched eyebrows on some of the English jugs, such as those from Hangleton, Bramber Castle and Winchester, suggests that the region of Rouen may well have supplied the models for these. Other contacts, whether as actual imports or by imitation, are further to the E. in the Low Countries.

232. Buff ware with a light grey core: flower motif stamped on under a thick, yellow-green glaze. Found as for no. 229.

233. Buff ware: strip decoration applied and moulded: portion of an impressed stamp: thick dark green glaze. From trial trench S.W. of Building 1.

234. Buff ware: thumbled applied strip with narrow strap decoration at right angles: olive green glaze. Within palisade line N.E. of Building 3.

235. Light buff ware: wave and band decoration incised with broad tool: dark green glaze. From metalling, Track 2.

236. Buff ware, fired through: applied 'V' in high relief: green glaze: wall pierced twice. This may not be part of a jug: ?part of a roof finial. Possibly but not certainly built into S.E. wall of Building 1.

237. Pink ware, buff inside: applied strip decoration: dark olive-green glaze. Found between chalk scarp and N. wall of Building 3.

238. Pink ware, buff inside: applied scroll decoration: olive green glaze. Found as for no. 237, from same jug.

239. Reddish-brown ware: combed horizontal and wavy lines: spots of glaze. Cf. Bramble Bottom, *S.A.C.*, XCIII (1955), fig. 6, no. 1.

Bung-Holes (Fig. 27)

Four bung-holes from jars or flagons were found. The earliest, no. 240, in a red, flinty ware was very small: probably 12th century. From early ditch W. of Building 1. It is possible that this sherd is not from a bung-hole, but that it may be the end of a pipkin handle.

241. A heavy red ware, incompletely oxidised. From Building 1.

242. A buff, sandy ware with grey core: slightly sagging base. From Building 3.

243. A grey ware with pink core: well finished, with clear cut basal angle: spots of glaze and remains of white slip brushed decoration. From golf green W. of Building 8. Similar body sherds from Building 4.

A 13TH CENTURY FIRECOVER by J. G. Hurst. (Fig. 27)

244. A thick coarse sherd with the start of a large strap handle and a circular hole pierced at the start of it. This was found near the palisade line E. of Building 3. There is an exactly comparable sherd with a similar hole from Northolt, Middlesex⁷ and a strap

¹ Bijloke Museum, Ghent.

² Gruuthuse Museum, Bruges.

³ Musée des Antiquités, Rouen.

⁴ Musée de Céramique, Sèvres. F. Poncetton et G. Salles, *Les Poteries françaises* (1928), pl. vi.

⁵ Musée Municipal, Laon.

⁶ F. Parenteau, *Inventaire Archéologique* (1878), p. 13, pl. iv, 6 and 9.

⁷ *Med. Arch.*, V (1961), p. 265f., and fig. 69, no. 85.

handle with a hole at each end in the Ipswich Museum (unpublished). Mr. E. M. Jope originally listed four examples from Newbury, Berkshire; Enstone, Oxfordshire; Avebury, Wiltshire and Wooton Bassett, Wiltshire.¹ To these he added another from Brough-under-Stainmore, Westmorland, in 1955.² Mr. T. C. M. Brewster found the top part of a fire-cover at Flixton, Yorkshire.³ This has the typical two holes and the fire blackening inside, not on the outside as would have been the case with a lid. Some of these examples take firecovers back to the 12th century.

It was not, however, until the finding of complete examples from Laverstock, Wiltshire, and Winchester that the full significance of these covers was realised by Mr. G. C. Dunning.⁴ The Laverstock example, of which an isometric drawing is shown at a reduced scale (Fig. 27) has similar, though smaller, holes near the base of the large strap handle. This was found with decorated jugs on a kiln site suggesting a date in the second half of the 13th century.⁵ The other complete example from Westgate, Winchester, had a large number of holes and was found associated with a glass lamp and other pottery of the 13th century.⁶

Firecovers or *couvres-feu*, were a common feature in medieval times. Before the invention of matches it was essential to keep the fire alight at night and, by scraping embers together and covering them with a firecover, the fire was kept going and danger of the fire spreading to the timber superstructure of the room while people were asleep, was avoided.⁷

It has not been possible to locate any medieval references to firecovers as such. According to the Oxford English Dictionary the earliest references to curfew already refer to the ringing of the bell and not the cover itself.⁸ There is more evidence from post-medieval

¹ *Oxoniensia*, XI-XII (1946-7), p. 169, fig. 24, nos. 3 and 4.

² *Trans. Cumb. and West. Archaeol. and Archit. Soc.*, LV (1955), p. 87.

³ *Two Medieval Habitation Sites in the Vale of Pickering*, Yorkshire Museum 1952, p. 24, fig. xv, no. 27.

⁴ I am grateful to Mr. G. C. Dunning for his advice on this note and for drawing to my attention two further examples; one from the Rye kilns, Sussex, and the other from Bentley, Farnham, kiln, in the British Museum. Also to Mr. D. Thomson regarding a fragment of another Sussex firecover handle among the medieval pottery from Saxon Down, Ringmer, now at Barbican House Museum, Lewes. Further details and a drawing will be published in Part II (*S.A.C.*, forthcoming).

⁵ *Museums J.*, LX (1961), p. 253. The drawing (fig. 27) shows vent holes as in the Hangleton sherd. The holes in the Laverstock firecover are smaller and a little distance away from the ends of the handle.

⁶ In Winchester Museum, report forthcoming.

⁷ Medieval Dutch firecovers are dealt with by Mr. J. G. N. Renaud in 'Een middeleeuwse Vuurstolp,' *Berichten van de Rijksdienst voor het oudheidkundig bodemonderzoek*, VII (1956), pp. 109-110 and *ibid.*, V (1954), p. 142, fig. 6, nos. 3 and 5; pl. xxxi and *ibid.*, IX (1959), p. 216, fig. 19.

⁸ Oxford English Dictionary.

times. Ornate pottery firecovers were being made in France in the 17th century.¹ Simpler Dutch examples are shown in 17th century paintings by J. Vrel² and another is reproduced by William Hone.³ Their use is further confirmed by a pottery example in the Gemeentemuseum in The Hague which is inscribed 'This cover is very good to set over the fire; who uses this cover is never in fear, 14 October 1775';⁴ and by regulations issued in Westzaan in 1644 that 'in every house there must be a good ash hole . . . and on all fire-places in which there is a fire, a cover for the fire.'⁵ Later firecovers are usually not circular but half-round and are clearly designed for use with fire-places set in the wall while the medieval round ones covered open hearths in the centre of the room.

By the 17th and 18th centuries earthenware firecovers were replaced by metal ones. There are examples in The Victoria and Albert,⁶ the Brighton and Hastings museums.⁷ Forty years ago W. Ruskin Butterfield listed other examples⁸ but was puzzled by their use as they seemed to be more ornaments than practical firecovers; also most of them were not fire blackened inside. Mr. J. de Kleyn has recently suggested⁹ that by the 17th century they were used more in the form of firescreens to cover up the empty fireplace in summer when the fire was not in use. This seems to answer the problem and it is interesting that the form of the curfew outlived its original purpose.

These are numerous examples of firecovers in Holland. These are fully described by Mr. de Kleyn and Mr. J. K. Haalebos.¹⁰ In fact

¹ B. Rackham, *A catalogue of the Glaisher Collection*, I, p. 229, no. 1814 and Vol. II, pl. 136a. This is of the half-round, not circular shape. It was made at Sorrus in Picardy and is dated 1616. There are two other examples in the Musée des Beaux Arts et d'Archéologie at Boulogne.

² J. Vrel, 'House Interior,' painting in the Rijksmuseum, Amsterdam; illustrated in J. de Kleyn, 'Vuurstolpen en vuurkorven,' *Bijdragen en Mededelingen Het Nederlands Openluchtmuseum*, Arnhem, XXII (1959), pp. 35-42. This important paper sets out the latest evidence for post-medieval firecovers and clearly explains their use and development. Another firecover is to be seen in Vrel's, 'The little comforter of the sick,' illustrated in *Cat. tent. Kunstschaten uit Ned. Verzamelingen*, Boymans Museum, Rotterdam (1955), fig. 141.

³ William Hone, *The Every-day book*, I (1826), p. 242, from a note in F. Grose's *Antiquarian Repertory*, I (1775), p. 89. The illustration is again reproduced and the custom discussed in R. Chambers, *The Book of Days*, II (1864) pp. 333-4. I am greatly indebted to Mr. J. H. Harvey for providing me with these references.

⁴ Gemeentemuseum, no. OCN 881. Illustrated by de Kleyn, *op. cit.*, fig. 4.

⁵ de Kleyn, *op. cit.*, p. 35.

⁶ G. B. Hughes, 'Horse Brasses,' *Country Life* (1956), p. 75, pl. 28.

⁷ *Sx. N. and Q.*, V (1934), p. 92.

⁸ W. Ruskin Butterfield, 'Two Bygones, the curfew and the bed-waggon,' *Connoisseur*, XLVI (1916), pp. 145-6 and 'The Curfew: a puzzling bygone,' *ibid.*, LVI (1920), p. 216.

⁹ de Kleyn, *op. cit.*, in note 9.

¹⁰ J. K. Haalebos, 'Enkele vuurstolpen uit Alkmaar en omgeving,' *Westerheem*, VIII (1959), pp. 85-88 and pls. xiv-xv. See also *ibid.*, IX (1960), p. 16, pl. iii.

much more work has been done on these in Holland than anywhere else.¹

Firecovers are mentioned in many Dutch inventories but they seem to be rare in English ones. Mr. M. W. Barley informs me that he has not come across any in all the inventories that he has examined, while in Essex, Mr. F. Steer only found two references amongst 245 inventories.²

FLEMISH STONEWARE JUG by J. G. Hurst. (Fig. 27)

245. Three sherds of a jug in hard grey stoneware with patchy reddish-brown glaze. The sherds are very heavily grooved and two of them form the lower half of the body of a globular jug while the rim shows that the neck was slightly splayed. The jug was dented before firing thus giving the surviving sherd an odd kink. It may, however, be very closely compared both in shape and fabric with a jug from Stockwell Street, Colchester.³ The flared neck is unusual in jugs of this type but is only a variation of the tulip mouthed beakers⁴ which originate in the 14th century.⁵

The Colchester jug is datable to the first half of the 15th century and the Hangleton example is not likely to be any later. It has been restored as the Colchester jug but it could be a true tulip mouthed beaker with its handle lower down. Other early Siegburg jugs in England and abroad are discussed in the Colchester report already referred to. There has been a tendency in the past, especially amongst art historians, to place these jugs late. In England they are often put into the second half of the 15th century. There is now increasing evidence for Jacoba jugs being not only early-15th century but dating well back before 1400. Mr. M. Biddle has an example from Seacourt, Berkshire, which is in a context of the 14th century⁶ while Mr. J. G. N. Renaud has recently found another jug in a mid-14th century context in Holland.⁷

Since the above was written an examination of the German material⁸ has shown that purple-toned stonewares like the Colchester and Hangleton examples are not very typical of Siegburg where the products were mainly off-white or light grey. It is more likely that they come from one of the Flemish kilns or from Langewehe, south-east of Aachen,⁹ which was producing jugs of this type and fabric

¹ I am greatly indebted to Mr. J. G. Renaud, Mr. J. de Kleyn and Mr. J. Ypey for their help and advice concerning the Dutch firecovers.

² F. Steer, *Farm and Cottage Inventories of Mid-Essex 1635-1749* (1950), p. 34, Inventory 140 and p. 209, Inventory 166.

³ *Trans. Essex Arch. Soc.*, 3S. I (1960), pp. 3-4 and fig. 32.

⁴ A. Klein, *Rheinisches Steinzeug des 15 bis 18 Jahrhunderts* (1949), pl. iv.

⁵ *Rotterdams Jaarboekje* (1953), p. 127, no. 49, fig. 3, no. 9.

⁶ *Oxoniensa*, XXVI-XXVII (1961-2), p. 165f., fig. 27, no. 14.

⁷ From Castle Haarlem, Heemskerk. Information Mr. J. G. N. Renaud.

⁸ I am greatly indebted to Dr. B. Beckmann for showing me his recently excavated material from the Aulgasse kiln site at Siegburg.

⁹ *Keramos*, 6 (Oct. 1959), pp. 33-5.

during the 15th century. It also now appears that most of the 16th century so-called Siegburg jugs with white or brown glazes¹ also come from the Flemish kiln sites.²

THE 15TH CENTURY LOBED CUP by J. G. Hurst.

246. Thirtyfour small fragments of pottery were found in Building 5 associated with the Flemish stoneware jug. These sherds are of a very thin off-white ware with a mottled yellow-green glaze inside and out. They come from one, or more—very few of the sherds join—lobed cups.³ More sherds of this ware were found on the M.P.B. & W. excavation and it is proposed to deal with both lots together in the second report.⁴ There has been a tendency for these cups to be placed at the end of the 15th century, or later, but there is increasing evidence for them in earlier 15th century contexts.⁵

A MID-17TH CENTURY GROUP FROM THE PARSONAGE HOUSE by J. G. Hurst. (Figs. 28, 29)

A large number of fragments of Bellarmine stoneware jugs were found in the cellar and on the floor close to the east wall. Many of them showed traces of burning and the group may therefore be firmly assigned to the fire of 1666. Unfortunately the sherds were very fragmentary and it was not possible to reconstruct any of the jugs. Eleven of the larger fragments are illustrated (247-257). The jugs are tall and not so globular as most early Bellarmine and in fact they all belong to Holmes's type VIII.⁶ In 248 the typical late hourglass-shaped mouth is seen while in 252 crude teeth are shown looking more like fangs. These are typical features of the mid-17th century Bellarmine and fit in very well with the date of the fire. In 247 the bottom part of the mask has come off showing the method of manufacture since the masks were moulded and then applied to the necks of the jugs. The medallions are also typical of late Bellarmine with their rosette⁷ and rose over bar and heart patterns. The base 251 has the cheese-wire marks caused by removal from the wheel which is associated with German stoneware. In the opinion of Mr. Holmes most examples of type VIII are English copies. It is, however, very difficult to be certain of this point and the question as to whether the Hangleton examples are German or English stoneware should be left until more work is done on kiln sites both here and abroad. All the sherds are real stoneware and most have the typical mottled brown glaze.

¹ *Ant. J.*, XL (1960), p. 192, fig. 2, no. 7.

² Winchester report forthcoming.

³ B. Rackham, *English Medieval Pottery* (1948), pl. 44.

⁴ *S.A.C.*, forthcoming. The illustration will appear in that volume.

⁵ *Trans. Essex Arch. Soc.*, 3S. I (1961), p. 45.

⁶ M. R. Holmes, 'The so-called Bellarmine mask on imported Rhenish Stoneware,' *Ant. J.*, XXXI (1951), pp. 173-179.

⁷ E.g. Another example of type VIII from St. Benedict's Gates, Norwich, which also has the hourglass-shaped mouth and a similar rosette. *Norfolk Arch.*, XXXI (1955), p. 75, fig. 17, no. 9.

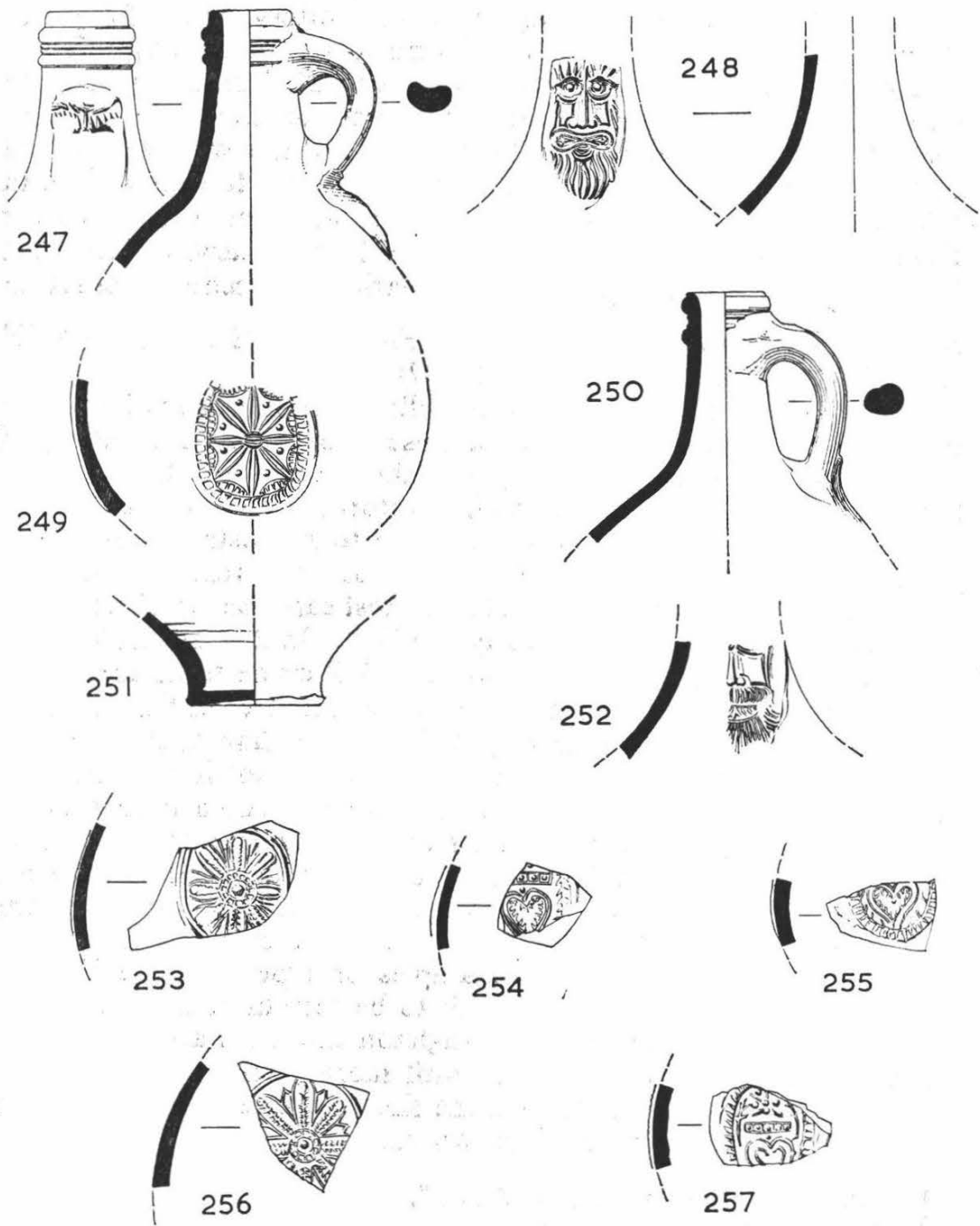


FIG. 28. POTTERY. BELLARMINES FROM PARSONAGE HOUSE 247-257, NOT LATER THAN 1666 (†).

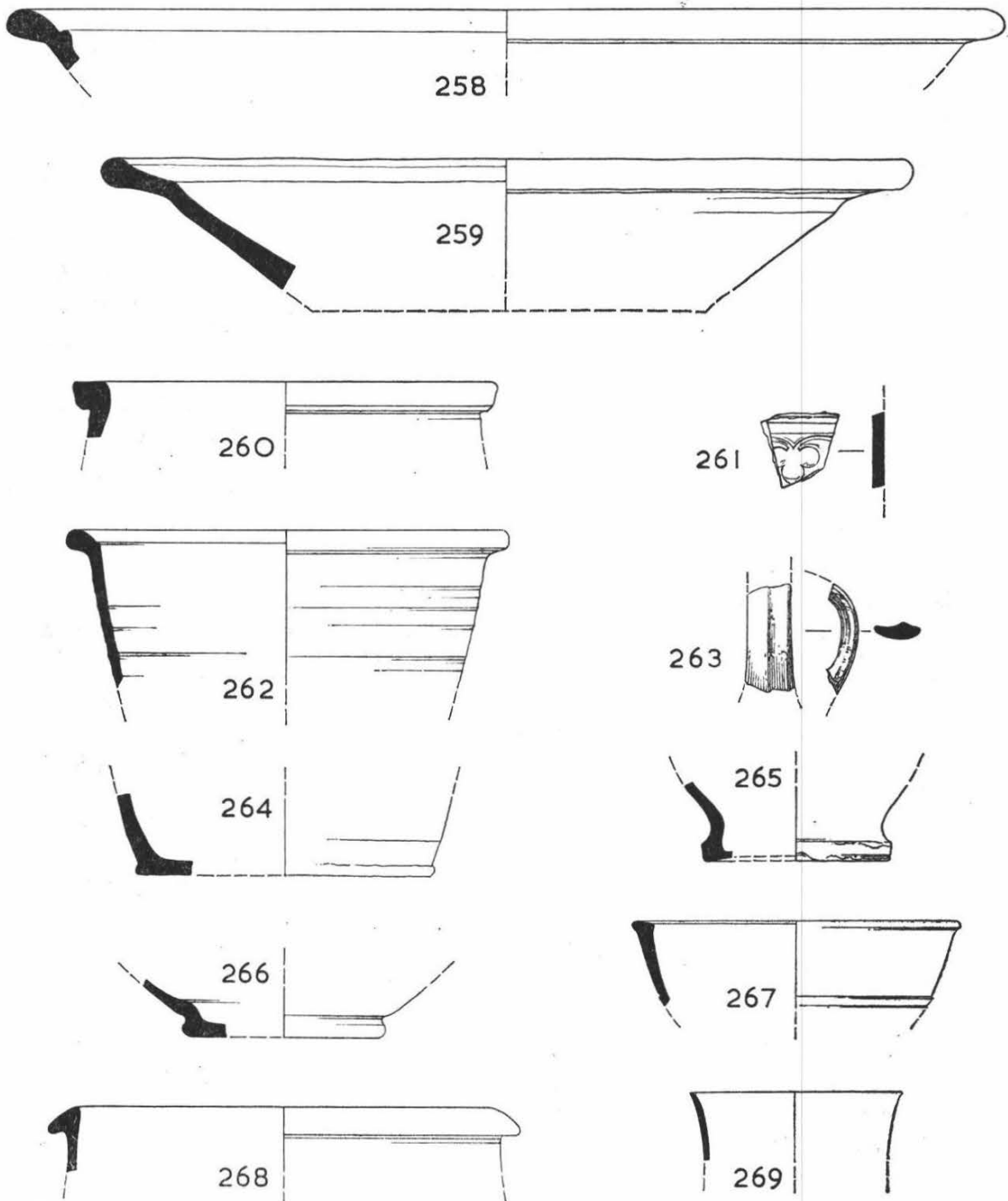


FIG. 29. POTTERY. OTHER SHERDS FROM PARSONAGE HOUSE 258-269, NOT LATER THAN 1666 (†).

The coarse pottery from the cellar and floor was also very fragmentary and no complete profiles were obtained. No pottery groups of the 17th century have been published before from Sussex and, in view of the fact that this deposit is dated to before 1666, it is well worth while illustrating a representative series of sherds.

258-9. Two shallow bowls of typical 17th century shape.¹ 258 is a red ware with a grey reduced inside. Green-brown glaze inside. 259 is a red ware with a grey core and green glaze inside much cracked and discoloured by contact with the fire.

260 is the neck of a storage jar with a squared rim heavily moulded underneath.² Hard grey ware with buff surfaces and green-brown glaze inside. This sherd also seems to have been near the fire.

261. Sherd of red ware from the side of a bowl. Glossy brown glaze inside and stamped trefoil pattern outside. This is most unusual. Individual circular stamps, etc., are fairly common in this period but complex ones of this kind are rare.

262. Upper part of a small straight sided bowl. Brown ware with some grits. Brown-yellow glaze inside. This is another common form.³

263. Small strap handle of red ware and brown surfaces.

264-6. Three bases with varying treatment of the footed base. 264 is in red ware with a red-brown glaze inside. 265 is grey with buff surfaces, similar to number 260. This base is derived from the German stoneware Bellarmines (cf. 251). 266 is red ware with a glossy brown glaze inside and out.

267 is the upper half of a small bowl or cup. Grey ware with green glaze inside much affected by contact with the fire.

268. Rim of a storage vessel: red ware with mottled brown glaze inside.

269. Rim of a tyg or posset pot: purplish hard thin ware with glossy manganese glaze inside and out.

There is not as yet sufficient local comparative material for this group but the forms are those common to most of south-east England from East Anglia to the Home Counties and Sussex, where these red wares with various brown glazes are found from the middle of the 16th to the middle of the 18th century.

POTTERY ASSOCIATIONS

The depth of topsoil above the flint tumble or solid chalk throughout the cuttings rarely exceeded 9ins. This means that associated pottery may range in date over the life of the buildings, and those dates will be extended by stray sherds dropped before and after.

¹ J. G. Hurst & J. Golson, 'Excavations at St. Benedict's Gates, Norwich,' *Norfolk Arch.*, XXXI (1955), p. 83, fig. 20.

² Cf. *ibid.*, p. 86, fig. 21, no. 3.

³ Cf. *ibid.*, p. 86, fig. 21, no. 6.

The following table lists, where it can be established, the sherds which were found together, or in the same layer. There were a few sealed layers, pits and postholes and these are marked (S).

GROUP No.	SITE	LAYER	ASSOCIATED SHERDS (illustration numbers)
1	Building 1.	Topsoil and thin flint tumble above chalk and floor.	33 34 51 65 75 84 85 89 108 125 149 152 189 222 223 227 239 (One piece as 239 found in posthole outside of S.E. wall)
2	Building 1.	In shallow ditch below N.E. wall (S).	38 204
3	Trial cuttings W. of Building 1.	Topsoil above shallow ditch.	43
4	Trial cuttings W. of Building 1.	In shallow ditch below topsoil (S).	1 7 201 240
5	12ft. x 4ft. Trial cutting S.W. of Building 1.	Topsoil, 15ins. thick.	115 124 161 171
6	20ft. x 4ft. Trial cutting S.W. of Building 1.	Topsoil here av. 23in. deep. From upper 9in.	32 218
7	20ft. x 4ft. Trial cutting S.W. of Building 1.	Ditto, below the upper 9 in.	68 140 233
8	Building 3.	Topsoil around N.E. corner (sloping ground).	53 54 95 102 192 200 (This group may equate with Group 16)
9	Building 3.	Chalky earth layer below topsoil as last, outside of walls.	25 30 40 45 50 55 78 147 150 159 160 237
10	Building 3.	At base of E. wall and chalk scarp, below the last two layers.	19 20 24 28 56
11	Building 3.	On chalk floor, inside the building, below topsoil.	23 57 162a 170 209 211 242
12	Building 3.	Below outer W. wall of oven (S).	193 and an internally green glazed base (not illustrated) similar to 103 or 104
13	Building 3.	Built into flint walls (S).	17 18 66
14	Building 3. N.W. annexe.	Thin layer of topsoil above solid chalk.	27 42 79 188.
15	Plateau area N. and E. of Building 3, including palisade line.	Thin layer of topsoil above solid chalk.	3 8 29 49 62 69 70 81 83 86 90 91 97 126 127 128 133 137 153 155 156 157 163 164 173 183 195 198 225 226 230 231 244

GROUP No.	SITE	LAYER	ASSOCIATED SHERDS (Illustration numbers)
16	Plateau area approaching N.E. corner of Building 3.	Deeper topsoil above solid chalk.	72 77 87 111 113 122 131 133 135 165 166 167 168 179 180 181 187 201 212 221 224. (This group may equate with Group 8)
17	Golf green S.W. of Building 3.	Thin layer of topsoil above solid chalk.	52 96 118 130 140 145 151 158 164 173 174 175 185 199 208 212 (joins sherd in Group 16), 242 (joins sherd in Group 11), 243 (Groups 8 15 16 and 17 are all from same topsoil layer covering a large area)
18	Palisade postholes E. of Buildings 3 and 8	In postholes (S).	82 and 182. In another posthole were 104 and a base the same as 224.
19	Slope between palisade and E. wall of Building 8.	Topsoil 9in. thick.	22 46 58 59 103 107 112 136 177 207 229 232
20	Slope between palisade and E. wall of Building 8.	Below topsoil.	4 37 48 60 61 76 98 109 120
21	Track 2, E. of Building 3.	In topsoil above metalling.	139 215
22	Track 2, E. of Building 3.	Below topsoil in the metalling.	2 14 63 64 74 92 94 114 134 138 184 213 235
23	Building 8.	Topsoil above chalk, including thin flint tumble.	47 67 80 88 116 119 129 141 146 216 220 228
24	Pit D. S.E. of Building 8.	Lower flint filling (S).	110 178 205
25	Pit E.	Top layer (1) (S).	9 10 11 13 41 41a
26	Pit E.	Lower layer (3) (S).	12 21 39
27	Pit F, Building 5.	Pit filling (S).	15 16 26
28	Building 5.	Depression between postholes.	245 246
29	Parsonage House.	1666 is latest date	247-269

TILES

The tiles of baked clay fall into four categories: Roman tiles; oven, or hearth tiles; paving and roofing tiles. Of the first three nearly all, with the exception of those from the Parsonage House Cellar, were unglazed. The study of decorative paving tiles in Sussex has received attention,¹ but the lack of specimens has prevented a similar study of tiles from the more humble establishment.

¹ 'Monastic Paving Tiles,' by Lord Ponsonby and Hon. M. Ponsonby, *S.A.C.*, LXXV (1934), pp. 19-64.

Roman Tiles

There were about one dozen small pieces of Roman roofing tile and several fragments of bonding tile from inside Building 1. Pieces of bonding tile were found also inside and outside of Building 3 and underneath a wall of Building 8. These are similar to the tiles excavated by Mr. Norris from the Romano-British villa and corn-drying ovens at West Blatchington. The Hangleton specimens may have come from that site although the use to which they were put can be but speculative. In country lacking building stone—as distinct from flint—these pieces of tile would have been of value for making hearths, but none showed any signs of secondary burning.

Oven or Hearth Tiles

Fig. 30, 1. A restored tile from Building 1, in size a bare 8in. square by 1in. thick. Burnt upper face, edges not bevelled. Underside pricked with a round pointed instrument, there being between twenty and thirty holes in a tile, c. 1250-1275. In the example illustrated two of the holes penetrated the full thickness. Some other 'round-hole' tiles had slightly bevelled edges.

Fig. 30, 2. A restored tile from floor of oven, Building 3. These tiles vary between $6\frac{1}{2}$ in. and $6\frac{1}{2}$ in. approximately square. Average thickness 1in., but may be up to $1\frac{1}{4}$ ins., burnt on top, edges bevelled. Underside marked with square or rectangular tapering holes, the majority penetrating nearly to the upper surface, though a few go right through. There are between twenty-five and forty holes per tile. Some tiles have holes up to $\frac{3}{8}$ in. square, while others have stab marks not exceeding $\frac{1}{8}$ in. square: all c. 1250-1300.

Each building contained at least a few fragments of these tiles, while Building 1 had remnants of up to one dozen and Building 3 a few more, including those in situ in the oven.¹ The larger tiles with round stab holes in the oven were used somewhat earlier than those with square stab-holes, but this may have been due to availability at the time. The tiles in Building 1 were all of the round hole variety; Building 8 were square hole; Buildings 3 and 5 had some of each, while the fragments in Buildings 2 and 4 were small, without holes. Stray pieces outside the buildings were about half of each type.

Lord Ponsonby rightly draws attention to the importance of examining the backs of tiles.² The stab-holes, formed with a round or square pointed instrument such as a nail or sharpened stick, were made (as Lord Ponsonby suggests) either to help in drying the clay before firing or, according to Mr. Musson's useful discussion with a practical tile-maker regarding the tiles at Bramble Bottom, to allow for the escape of gases at the time of firing to prevent blistering. No doubt both processes would be assisted by the practice.³ There

¹ L. F. Salzman, *Building in England* (1952), pp. 98-9, mentions 300 'hurth-tigel' bought for fireplaces at Portchester in 1397. At Clarendon in 1485 both 'herthtyle' and 'paving tyle' were bought for the repair of 'le ovyn.' The Hangleton tiles show that such tiles were in use between 1250 and 1300.

² *S.A.C.*, LXXV (1934), pp. 31-4.

³ It is noticeable that a medieval jug handle, being the thickest part of the vessel, is usually slashed or pricked in a manner not unlike the back of a hearth tile and presumably for the same purpose. There is at Barbican House, Lewes, part of a $\frac{3}{4}$ in. thick roof tile from Pevensey Castle (reg. no. 44) with round stab-holes on the underside. This suggests that the holes were made for the reasons stated above. See also the ridge tile from Hangleton Parsonage House (fig. 31, 9).

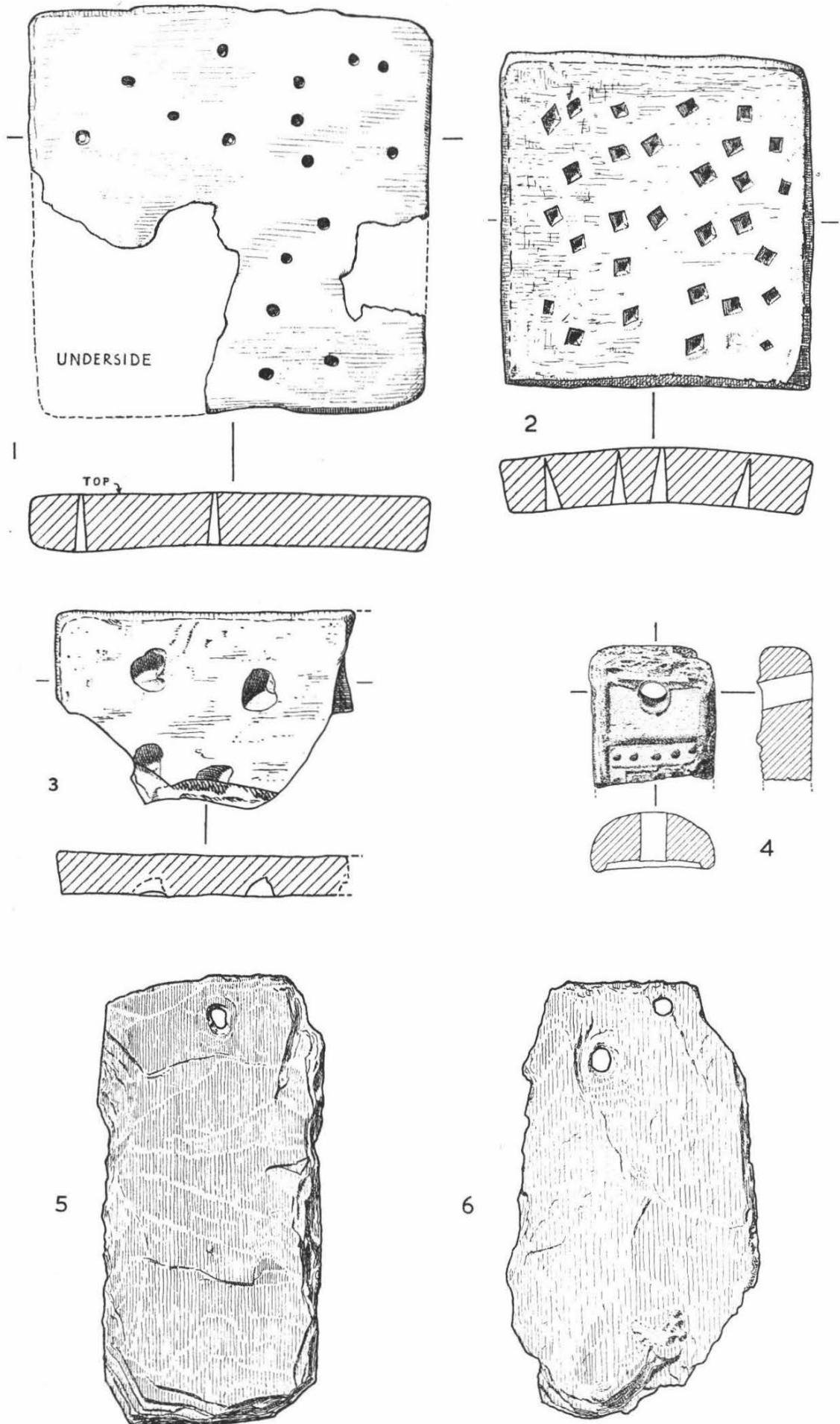


FIG. 30. OVEN AND PAVING TILES, CLAY MOULD AND ROOFING SLATE (±).

is no evidence that the holes improved the bedding of tiles, none of which were laid in mortar. The holes did not prevent the tiles from warping during manufacture, for the undersides of most tiles are concave, more so with the square stab-hole kind, due perhaps to the great number of voids in a smaller tile. None is truly square or of an even thickness. Owing to the burning in hearth or oven the upper surface of a typical tile of either kind is blackened and friable, while the underside and edges may vary in colour from red to brown.

Pieces of similar tiles, associated with pottery (except Rye) not unlike that from Hangleton, have been found on other medieval sites in Sussex, as follows:

<i>Site</i>	<i>Type of stab-hole</i>	<i>Remarks</i>
Bramble Bottom, Eastbourne. ¹	Round	Not same as Hangleton. Darker body containing grit. Upper surface burnt away.
Hamsey. ²	Round	Body as Hangleton.
Leap Bottom, Storrington. ³	Square	Body as Hangleton. Burnt on underside only.
Saxon Down, Ringmer. ⁴	Round and Square.	Similar to Hangleton in all respects.
Streatham Moated site, Henfield. ⁵	Square	Yellowish body, slightly thicker than Hangleton varieties.
Rye. ⁶	Round	Not same as Hangleton. Size 7in. x 7in. x 1½in., bevelled edges, grey body. No associated pottery.

Paving Tiles

Fig. 30, 3. Portion of an unglazed tile which may have exceeded 6in. long, from Building 1. Body pink on outside, grey inside, thickness ¾in., one edge slightly bevelled. The underside is rough and coated with a thin clay slurry from its previous bedding. The tile has not been burnt in a hearth. There are no stab-holes below, this being the sole example of a tile with heart-shaped keys, of which four can be seen. These may be compared with the reproduction of a photograph of keys on the backs of tiles in *S.A.C.*, LXXV (1934), p. 33.

iv. A solitary broken piece of floor tile, size 3ins. by 2ins. by 1in. thick, with slightly bevelled edge, bearing a thin yellowish-green glaze on the upper surface. This is not an oven tile, as the body, while of a pink colour, is not quite the same as the others and there are no signs of secondary burning. Found on floor inside Building 3.

v. Several dark green glazed paving tiles from the cellar of the Parsonage House, all showing evidence of wear, the glaze being patchy. Size, 4½in. x 4½in. and 1½in. thick. Unglazed parts reddish-brown in colour. Edges bevelled

¹ 'A 13th century Dwelling at Bramble Bottom, Eastbourne,' excavated by R. Musson, *S.A.C.*, XCIII (1955), pp. 157-170.

² From ploughed field E. of Church.

³ *S.A.C.*, LXIII (1922), pp. 41-4, and LXIV (1923), pp. 13-5. Now cultivated; specimens from ploughsoil, found by E. W. H.

⁴ Excavated by the late C. H. Vigor. Unpublished notes and finds at Barbican House Museum, Lewes.

⁵ Excavated 1959 by A. Barr-Hamilton.

⁶ Provenance in town unknown. Not necessarily the Rye kiln site. (Tile in Barbican House Museum, Lewes.)

except for one tile with square edges. Traces of mortar on some tiles. Undersides plain without any holes or keys. One similar tile found near churchyard gate during roadmaking.

vi. Two tiles (found with v.) same body colour, but yellow glazed, one being badly worn. Other than being $\frac{1}{16}$ in. smaller one way than the green glazed floor tiles the details are constant. Two more worn tiles were recovered during surface bulldozing.

Of the above, nos. 1 and 2 (oven tiles), 3 and iv (paving tiles), can be dated as the bulk of the pottery, i.e. late-13th to early-14th century. Nos. v and vi (paving tiles) although having been in use at the time of the destruction of the Parsonage House in 1666, are probably 14th or 15th century.

Roofing Tiles

Most tiles came from Building 1 and these were not plentiful. The pink, red and buff colours, shape and texture are all similar to roofing tiles of a much later date. The width of a tile could be observed on only two pieces, viz., $6\frac{1}{4}$ ins. and $6\frac{1}{2}$ ins. No tiles were complete enough to give the length, but it is probable that, as the size of the tiles was regulated in 1477 to $10\frac{1}{2}$ ins. by $6\frac{1}{4}$ ins. by $\frac{5}{8}$ in.,¹ those of one to two centuries earlier would have been about the same length, considering that the width remained virtually constant. The standard size for tiles today is $10\frac{1}{2}$ ins. by $6\frac{1}{2}$ ins. by $\frac{3}{8}$ - $\frac{1}{2}$ in. The Hangleton tiles have a slight camber in the width, but none in length. No tiles had nibs, the only method of fixing being by means of pegs which would have passed through the holes formed in the tiles. Several fragments bore traces of fine mortar suggesting they had been bedded, or torched, when utilised for roof covering. Most had one smooth face where the plastic clay had been struck off with a stick, while the other side was rough, due perhaps to manufacture being carried out on a straw-covered bench. This is apart from any surface weathering.

The following are all from Building 1 unless otherwise described.

Fig. 31, 1. Restored piece $6\frac{1}{4}$ ins. wide, broken in length, which exceeded $6\frac{1}{2}$ ins., thickness $\frac{3}{8}$ - $\frac{1}{2}$ in. Body, pink with slight admixture of powdered flint.

Fig. 31, 2. Broken tile $6\frac{1}{2}$ ins. wide, same length and thickness as no. 1. The body is red externally, the core being grey with little grit. There are two pegholes of irregular shape in the tile which is coarsely made with rough edges. The traces of mortar on the underside show that this tile was laid to $4\frac{1}{4}$ ins. gauge.

iii. A third kind of roofing tile was buff in colour, otherwise as no. 1, including pieces containing a peghole. Insufficient fragments joined to ascertain the width and length. Perhaps from same kiln as no. 1. One fragment had traces of green glaze.

iv. Two roofing tile fragments came from the lower filling of the Parsonage House cellar, not later than 1666:

(a) Broken tile $5\frac{3}{4}$ ins. wide, $\frac{5}{8}$ in. thick, pink body, mortar traces on one side.

(b) Broken tile $6\frac{5}{8}$ ins. wide, $\frac{1}{2}$ in. thick, light brown in colour, heavy layer of mortar covering most of the underside.

Fig. 31, 5. Two pieces of unglazed ridge tile, too small for restoration. Thickness $\frac{3}{8}$ - $\frac{1}{2}$ in., pink in colour. The external radius to the upper piece is $3\frac{3}{4}$ ins.

¹ L. F. Salzman, *Building in England* (1952), p. 230.

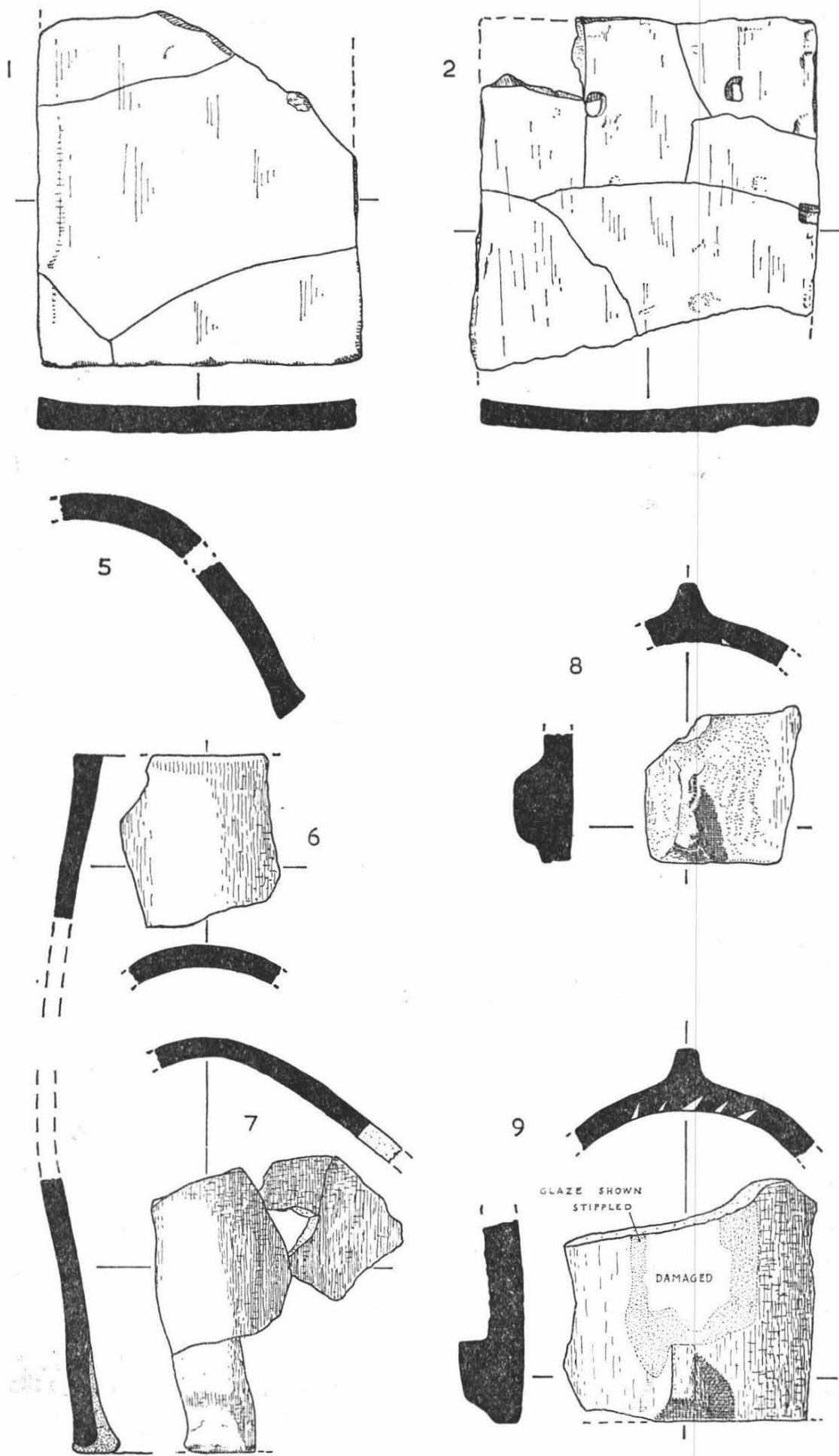


FIG. 31. ROOFING AND RIDGE TILES ($\frac{1}{4}$).

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The lower piece has a thickened edge and is flat for $1\frac{3}{4}$ ins. before the curvature starts. From Building 1, c. late-13th century.

Fig. 31, 6. End piece of ridge tile $3\frac{1}{2}$ ins. by 3 ins. by $\frac{3}{8}$ in. thick. Buff coloured body, thinly green glazed, flecked with brown externally, except on the end. External radius 3 ins. From Building 1, c. late-13th century.

Fig. 31, 7. Four joining fragments of $\frac{3}{8}$ in. thick green glazed ridge tile. Identical body to no. 6, but the outside glaze is thicker apart from some fading towards the flattened edge. External radius is $2\frac{3}{4}$ ins. An unusual feature is that, before firing, the end was thickened internally by the application of finer clay (shown dotted in the section drawing). The outer face of this lip is not glazed, but it bears traces of mortar. There was no side edge to this damaged tile, but the flattening can be seen tangential to the curved portion similar to no. 5. This tile has a bulbous swelling towards what would be the centre of the tile. If the length of a ridge tile is assumed to be $13\frac{1}{2}$ ins.¹ then the profile could be as shown between nos. 6 and 7. From Building 1, c. late-13th century.

Fig. 31, 8. Broken piece of crested ridge tile found during building operations on a house site in Field 7, with late-13th and 14th century pottery and much roofing slate. The thickness is $\frac{1}{2}$ in. with an external radius of $3\frac{1}{4}$ ins. The colour is pink with a grey core. The crest is poorly formed and appears to be hand-moulded. The underside has five shallow knife marks. There are remains of orange glaze over the crest and $1\frac{1}{2}$ ins. down the side, with a touch of green glaze near the next (missing) crest. Another small piece, 3 ins. by 2 ins. by $\frac{3}{8}$ in., spattered with orange and green glaze, came from the sewer trench nearby. There was no cresting on this fragment.

Fig. 31, 9. Broken piece of crested ridge tile from lower filling of Parsonage House cellar and thus not later than 1666, but may well be much earlier. The thickness varies from $\frac{1}{2}$ in. to $\frac{3}{8}$ in. Colour is pink with traces of green glaze on top. The underside contains many stab-holes passing obliquely into the body of the tile. External radius is $3\frac{1}{4}$ ins. The single remaining crest is at the extreme end of the tile and is unglazed. Striations show that the unwanted clay between crests was removed with a wire or knife. There is no trace of mortar on the underside.

x. Broken piece of uncrested ridge tile, $\frac{3}{8}$ in. thick, of light reddish-brown outer colour and grey core, external radius $1\frac{3}{4}$ ins. The top surface has a poor olive-green speckled glaze. Found near the Parsonage House. Of uncertain date, but the glaze suggests that it is not later than 14th-15th century. A very small fragment from a similar tile was found in Field 7.

OBJECT OF BAKED CLAY

Fig. 30, 4. Broken part of a mould, light grey in colour. Below the end dots of the group of five are traces of one more each side. Extensive enquiries have failed to produce any suggestions as to the object produced by the mould. It was found on the new building site by workmen in 1953, but not being received at first hand its find spot is unknown.

This has been made of well-fired clay, which is fairly refractory from its appearance and would seem capable of withstanding a temperature in excess of 1100° C. to which it has in fact most probably been exposed, at least in part. The shape and hole suggest that it is the top of a two-piece mould (at least.) It appears to have been press-moulded quite efficiently from a pattern with a reasonably highly finished surface. Microscopical and X-radiographic examination both suggest use with copper (alloy)—small amounts of residue of greenish and reddish material are detectable in places on the internal surface and agree with radiopacity such as is normally due to (heavy) metal traces—though not necessarily in metallic form. The X-radiograph also quite clearly shows the characteristic 'void-sweep' associated with deliberate moulding of clay containing organic matter, usually

¹ *Ibid.*, p. 230. See 'Medieval Buildings in Joyden's Wood,' by P. J. Tester and J. Caiger, *Arch. Cant.*, LXXII (1958), p. 27, fig. 3, where a ridge tile is $12\frac{3}{4}$ ins. long, $8\frac{1}{4}$ ins. from side-to-side and $3\frac{1}{2}$ ins. high.

quite fine but in the present case showing several 'twigs' up to 1in. in length. The internal surface carries a thin, uniform, grey 'skin' which may be due to the effects of contact with molten metal under reducing conditions, but any interpretation of the surface is necessarily modified by the fact that the object was available for examination only after a plaster cast had been made in it. The hole is most probably a 'riser' for the escape of air and gas during pouring. We are grateful to Mr. J. Shipley, School of Ceramics, Royal College of Art, for helpful comment and useful discussion.

GEOLOGICAL MATERIAL AND OBJECTS OF STONE

The medieval cuttings yielded about half a cubic yard of varying types of rock most of which showed traces of burning. Some pieces were built into the flintwork of walls while many others had been used in hearths.

Local Material (Not examined at Geological Survey and Museum).

A few beach pebbles.

Fragments of 'Sarsen' sandstone.

Ironstone.

Dressed and tooled hard chalk.

Other Sussex Rocks

Rough pieces of Sussex 'marble,' which is usually obtained from the Petworth area in W. Sussex, but there are also outcrops near Plumpton in E. Sussex. *A Wealden (Cretaceous) limestone.*

Wealden sandstone similar to that from the neighbourhood of Horsham of which a small amount had been used for roof covering, several pieces having nail or peg holes.¹ No large roofing stones were found. Several small pieces had parallel weathered edges between 3ins. and 6ins. apart. None of these stones would have been larger than any of the slates later described.

Other irregularly shaped pieces of Wealden sandstone were larger and often bore natural ripple marks. This kind of stone is still to be found near Horsham, being now used for garden paving. (Specimens not examined at Geol. Survey and Museum).

Rocks Foreign to Sussex

i. *Siliceous tufa or sinter.* It is composed of secondarily deposited silica stained with iron ore. A little calcite is present. A few small pieces found, one dressed square, from the base of the partition wall in Building 1.

ii. *Shelly limestone or 'Roach'* which may be of Oligocene, Eocene or Jurassic age, the fossils not being sufficiently distinctive to determine the age of the rock. Similar stone may be seen in the early-12th century nave quoins and door jambs of Hangleton church and in the oldest wing of the Manor-House. This may be the stone referred to by the late O. H. Leeney (a local ecclesiologist) in unpublished notes on Hangleton church as 'Quarr Abbey' (Isle of Wight).

iii. *A fine grained calcareous sandstone composed of quartz, calcite, limonite and biotite.* In appearance similar to *Hearthstones from the Greensand* but does not contain glauconite which is characteristic of the latter. Described by a practical stonemason as 'rotten-stone,' being light in weight. Some fragments bore coarse axe marks and one piece had a curved face with a radius of 10½ins. such as may be seen in the upper stones of a pointed arch with splayed jambs. The quoins of St. Helen's chancel (c. 1300) contain a few blocks of this stone.

¹ Not seen by Geol. Mus. I have found similar roofing stone fragments with peg holes in association with medieval pottery at Hamsey, near Lewes. Mr. A. Barr-Hamilton has found them at Streatham moated site, Henfield; also at Upper Barpham, near Arundel. For the last see 'The Excavation at Bargham Church Site,' *S.A.C.*, XCIX (1961), pp. 38-65.

iv. *A pink coloured, current bedded sandstone with black banding, composed of grains of quartz, with iron ores and a little feldspar in a matrix of calcite. Similar in type but not in colour to specimens of sand-rock from the Isle of Wight. Several small pieces found of indeterminate shape, not tooled.*

v. *Reddish sandstone composed of quartz grains up to 0.3mm. diameter. There is a considerable quantity of iron ore—magnetite and ilmenite, with limonite staining the quartz grains. Nearly all cuttings gave up these fragments, which are of broken quernstones.*

vi. *A compacted but weathered, shelly limestone similar to Purbeck (Jurassic) or Wealden (Cretaceous) limestones which contain the same fossil fauna. Several rough unshaped pieces found, also part of a quernstone (fig. 33, 3) and base of a mortar (fig. 32, 1).*

vii. *A calcareous grit containing numerous shell fragments of lamellibranchs and gastropods. It is similar to shelly bands found in the London Clay, of Eocene age. A few small unshaped pieces recovered.*

The nearest outcrop of Jurassic rocks is at Swanage, Dorset. Rocks of Cretaceous age occur in the Isle of Wight, surround the Hampshire Basin and form the Weald. Eocene and Oligocene rocks are found in the Isle of Wight and the Hampshire Basin. Rocks similar to i-vii are to be found amongst those of this region.

In a dissertation on stone used in churches Hussey¹ refers to the use locally of a freshwater-shelly limestone from the Isle of Purbeck. This may be the same as ii above. Similar shelly limestone is to be seen in the older parts of several Sussex churches. Hussey considers that Purbeck stone ceased to be extensively employed, i.e. in fresh supplies, when the improvement of architectural skill caused it to be replaced by Caen stone.

viii. There were numerous broken pieces of Caen stone from Buildings 1 and 3 including some with diagonal 'claw-tool' marks. One piece, 3ins. thick, had both faces circular in plan to an external diameter of c. 24ins. The outside bore the distinctive tooling, the inner face not being so treated, but was fairly smooth. This piece was built into a mortared wall of Building 1. A similar fragment of matching diameter was in a wall of Building 3. Both had fire marks caused before re-use. There is Caen stone in the church tower. (The Caen stone was kindly identified by Mr. T. E. Tilley).

During the Parsonage House excavations a stone from an attached column was unearthed by the mechanical excavator and a 12th century capital was discovered by Dr. L. Butler built into the N.E. corner of the churchyard wall (since demolished). Lower records of St. Helen's church,² 'The church was originally Norman, and a well-carved capital of that style was discovered about 25 years since—evidently from the old fabric.' This may refer to the same stone.

The village church has a 12th century nave and an early-13th century tower. The original chancel was entirely removed about 1300 and a new chancel provided.³ It is reasonable to assert that the dressed chalk and stone fragments found in the cuttings were filched from the masons' rubble left in the vicinity during the periods of

¹ Rev. A. Hussey, *Notes on the Churches in the Counties of Kent, Sussex and Surrey* (1852).

² *The Churches of Sussex*, etched by R. H. Nibbs, descriptions by M. A. Lower (1872).

³ *V.C.H. Sussex*, VII, p. 281.

building and re-building of the church. There are too few shaped pieces to suggest the parts of the church from which some of them came, except for the possible lancet window. The circular fragments being curved on both inner and outer faces are likely to have come from a tub-shaped vessel (? a font). The carved capital or the attached column might have formed part of the original chancel arch, but this is speculative.

ix. *A considerably weathered rock rich in quartz, feldspar and biotite.* Five small shapeless pieces came from Building 3. The rock is grey, rough and without any tooled surfaces to suggest use, but its hardness and texture might make it suitable for quernstones. If the specimens are not from an erratic rock from the seashore, subsequently broken, it is possible that they may have originated in Brittany.¹

x. *Mayen lava (See Querns).*

xi. *Slate (see Roofing Slate).*

xii. *Schist and Granulite (see Whetstones).*

STONE VESSELS

* Fig. 32, 1. Base of mortar made of Sussex or Purbeck 'marble,' see vi, above. The concave bottom is smooth, the outer face trimmed roughly circular in plan. Internal diameter 6½ins., 1in. thick wall. From Building 8.

Fig. 32, 2. One complete end and part of the opposite end of a diamond-shaped sandstone trough. The outer faces have been roughly dressed, the top is uneven, though with rounded edges. The interior surface of the hollow is rough and peck marks are visible in the upper part. The length of the vessel is uncertain, perhaps 15ins. as drawn, which would give an oval dishing of about 9ins. by 4½ins. The soft nature of the stone would limit its utility as a mortar for pounding, except with a wooden pestle. A groove in the top shows where a point has been sharpened. From Building 8.

QUERNS

A considerable number of fragments of rotary querns were found throughout the various cuttings (excluding the Parsonage House). Nearly all showed traces of fire, some still remaining in hearths and the oven floor. The fact that all but six pieces were less than 3ins. square—and the larger fragments also were broken is in keeping with the suggestion that quernstones were deliberately smashed by manorial officials in order to compel tenants to have their corn ground at the lord's mill.² The material used for querns was of three kinds: sandstone, shelly Purbeck or Wealden limestone and Mayen lava.³

Most date probably to the late-13th century.

Sandstone Querns

These formed the majority, of which forty recognisable pieces were recovered. It is impossible to say how many separate querns are represented—probably not more than two or three. None of the pieces join, but if they did, in bulk would form less than one pair of

¹ Information from Dr. J. Murray.

² L. F. Salzman, *Archaeol. News Letter*, VI (1958), no. 6, p. 139.

³ Dr. E. Cecil Curwen kindly examined the quern fragments and gave profitable advice.

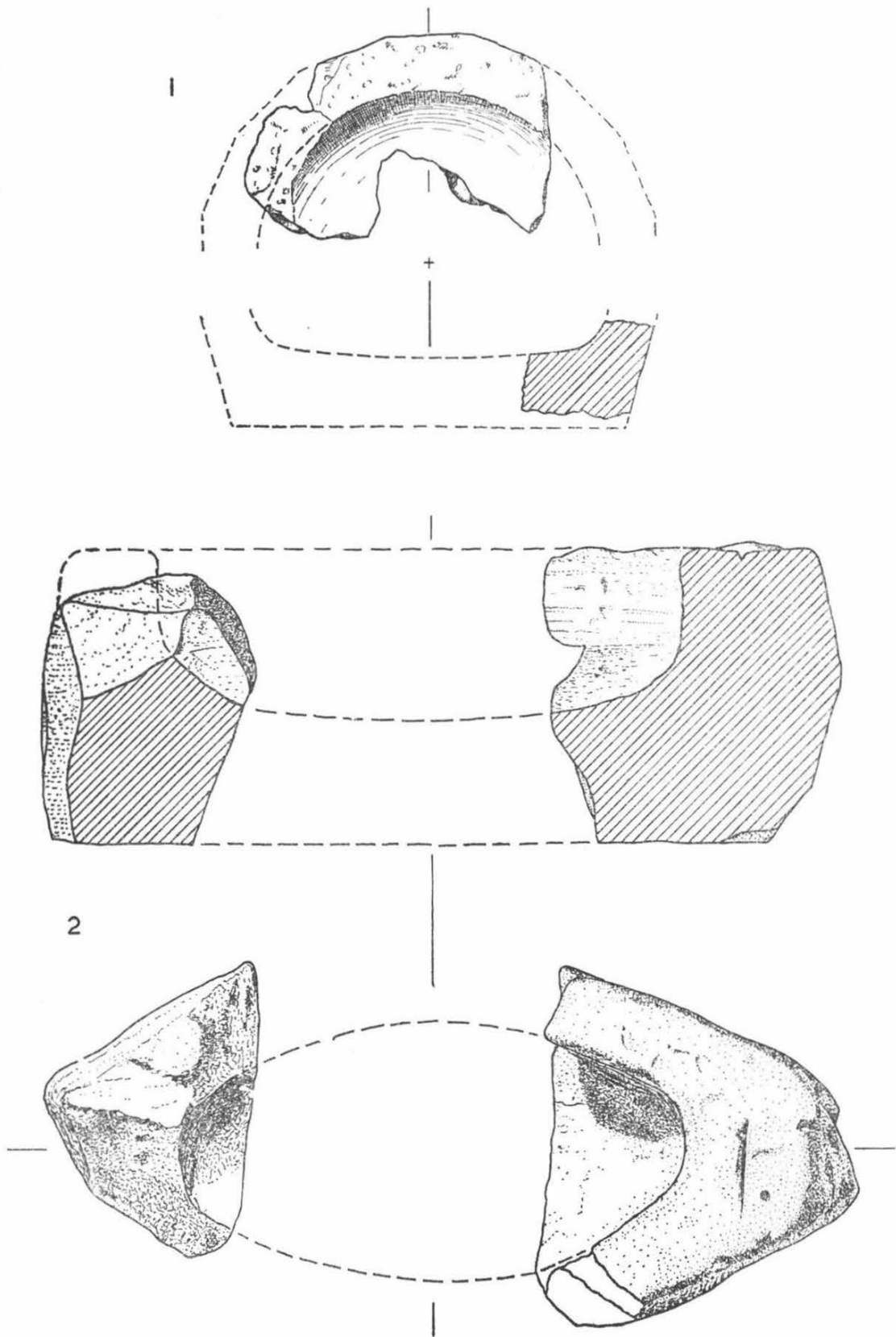


FIG. 32. STONE VESSELS (4).

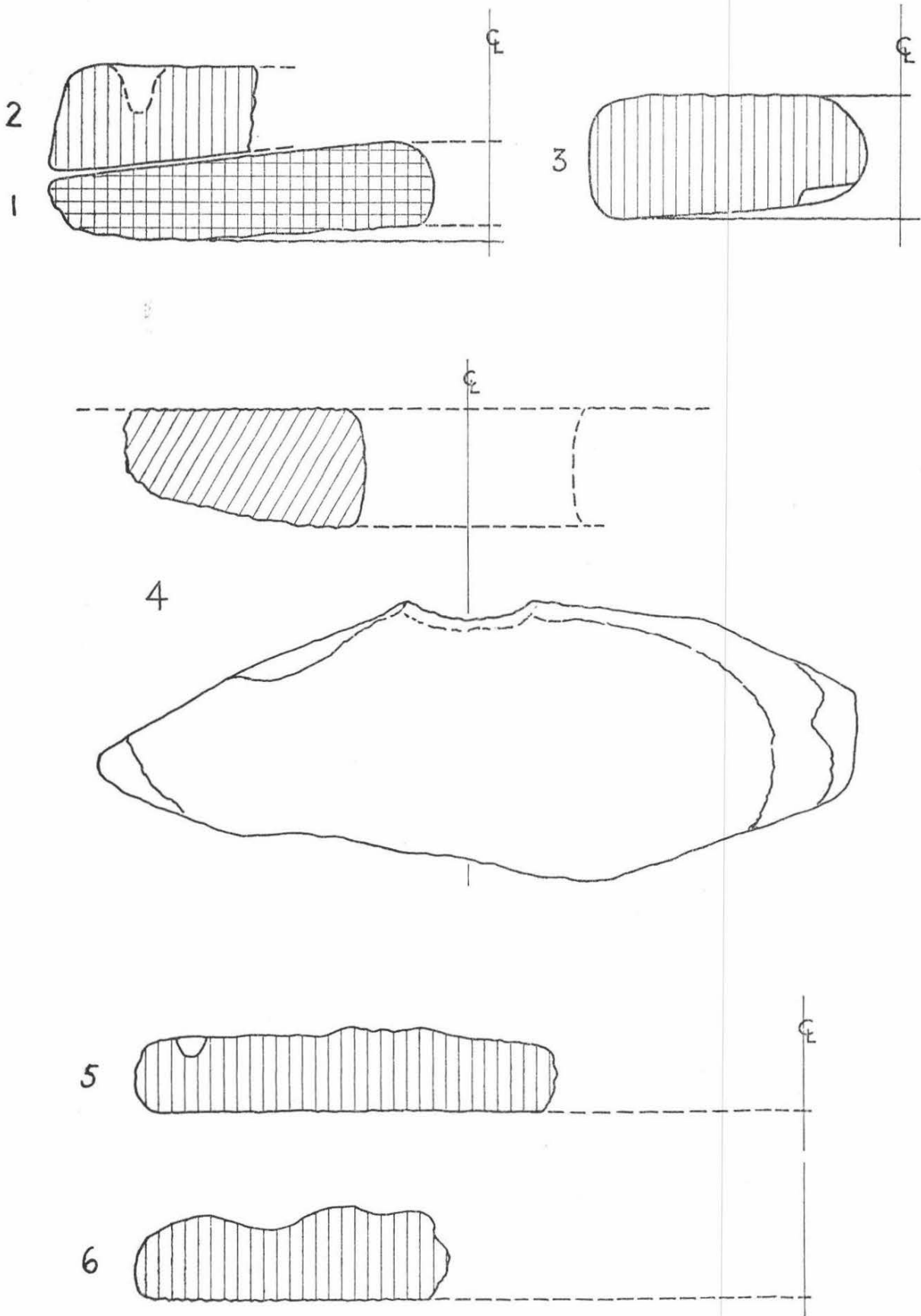


FIG. 33. QUERNS (4).

stones. Two thin, flattish stones, the upper with a shallow hole, or holes, near the outer edge for revolving by a handle or stick, represent this type of quern. There are no pieces to show that any were from pot-querns. Three fragments only were of greater thickness than those illustrated, viz. $2\frac{1}{2}$ ins. The stone is as described in *Rocks Foreign to Sussex*, v.

Fig. 33, 1. Part of a lower stone, diameter 17-18in., with a central hole about $2\frac{1}{4}$ in. across. The upper surface is slightly convex, the underside flat. From the metalling of Track 2.

Fig. 33, 2. Piece of topstone, similar diameter to 1, with a faintly concave grinding surface. A small piece of topstone of similar thickness had remains of part of a hole in the upper surface, $1\frac{1}{2}$ in. from the perimeter and 1in. deep (shown dotted in 2). From Building 1.

Shelly Purbeck or Wealden Limestone Querns

Fig. 33, 3. Nearly half of a topstone, damaged by fire and much weathered; found near Hearth 1, Building 1 in more than a dozen pieces. Diameter 12in., flat top, underside concave. The central hole has a diameter of $1\frac{3}{8}$ in. and the stone has a dovetailed recess below for the rynd. There is no sign of a stick hole. Despite the weathering, which is much in evidence elsewhere, the outer edge is sufficiently smooth to suggest that this stone was the upper section of a pot-quern. Another piece of similar stone, without any identifiable features, in size about 9in. by $4\frac{1}{2}$ in. by $2\frac{3}{4}$ - $2\frac{3}{8}$ in. in thickness found nearby, may be part of the bottom stone. One other shapeless piece, $2\frac{1}{4}$ in. thick was found near Building 3.

Mayen Lava Querns

It is recorded that from Romano-British and possibly prehistoric times until the Middle Ages quernstones made of a dark porous, soft basalt found their way from the Rhineland into Britain. Described usually as Niedermendig lava the majority actually originated in the Mayen area and it was not until the late medieval period that similar stone was quarried at Niedermendig.¹ Several specimens of lava from Hangleton were examined by Dr. J. Röder and Dr. Frechen of Bonn who found that all came from the Bellerberg lava-stream by Mayen.²

In addition to Hangleton, lava from seven more Sussex sites has been located: Upper Barpham Church excavation,³ from the surface of a ploughed field at Hamsey above a suspected manor-house site, and the late A. Hadrian Allcroft noted on a map in the possession

¹ 'Die Geschichte der Basaltlava-Industrie von Mayen und Niedermendig,' by F. Hörter, F. X. Michels and J. Röder, *Jahrbuch für Geschichte und Kultur des Mittelrheins und seiner Nachbargebiete* 2/3 Jahrgang 1950/51, pt. 1 (Mittelrheinisches Museum, Koblenz); pp. 1-32. (The second part appears in the same publication, 6/7 Jahrgang 1954/1955). Copies of these journals are in the Library. Cf. *Antiquity*, XXIX (1954), pp. 68-76.

² According to the latest information (*J. Brit. Archaeol. Assoc.*, forthcoming, and here referred to by kind permission of Mr. M. Biddle), petrological distinction is, after all, as yet impossible. There appears to be a dividing line, on archaeological grounds alone, at present indicating a date after about 1500 for all Niedermendig material.

³ *S.A.C.*, XCIX (1961), p. 65 (from 14th century building). A piece was examined by Dr. Röder and found to be identical in structure with that from Hangleton. Dr. Röder's practical assistance is appreciated.

of the Sussex Archaeological Society that a large block of Niedermendig lava was found in 1915 a short distance north of Glyndebourne windmill. This piece must be presumed lost. A small piece was found in 1962 by Col. J. D. Hill during excavations on a moated site, traditionally named 'The Old Manor-House,' at Bodiam. Pieces have also been found at Selmeston, Steyning and Burpham. Dr. R. A. Pelham has shown that during the 14th century millstones, or quernstones, among other goods were being imported into Sussex.¹ These were not necessarily from Mayen although the reference to Schiedam suggests that they might have been. Associated pottery from Hangleton indicates that imports were taking place also in the 13th century.

Two types of medieval quern are illustrated by Dr. Röder and his co-authors;² the earlier consisting of two flat stones, the upper being the thicker and with a hopper in the middle, the lower stone also with a central hole. The later type are pot-querns with flat grinding surfaces, the bottom stone having the greater depth. Both kinds have recesses in the topstone for stick operation.³ Most of the Hangleton pieces are too small to have any features, while the only sizeable remains have been split in depth as well as across. Such grinding surfaces as remain are flat. As remaining outer edges are damaged the Hangleton stones cannot be assigned with certainty to either of the German types.

Fig. 33, 4. A piece from Hearth 1, Building 1, in size 14½ in. by 5½ in. by 2⅜ in. thick. One side is flat, though somewhat rough, the other and all edges being broken. Part of the central hole is visible, the diameter of which would have been about 4 in. (A small piece from the same building had a maximum thickness of 2⅞ in.).

Fig. 33, 5. Part of a topstone containing the base of a stick hole, the upper part having been lost because of the fracturing of the stone. The underside is flat without any sign of tool marks. While the outer edge has suffered damage, enough remains to give the diameter as c. 25½ in. (as 6). From Building 1. (Building 5 yielded a fragment 2 in. thick, also with the base of a stick hole).

Fig. 33, 6. A piece of topstone, 25½ in. diameter. The outer edge has been sufficiently damaged to remove any traces of this piece having formed part of a pot-quern. The upper surface is irregular, but the lower face is flat and covered with shallow peck marks. Found near the oven in Building 3.

ROOFING SLATE

Fragments of roofing slate recovered from most of the cuttings were too few to indicate that all roofs had been covered with this material. Roofing tiles and Horsham stone were found in very limited quantities; thatch and wooden shingles would have perished.

¹ 'The Foreign Trade of Sussex 1300-50,' by R. A. Pelham, *S.A.C.*, LXX (1929), pp. 93-118; see Tables ix and xi. By the same author, 'Some Further Aspects of Sussex Trade During the Fourteenth Century,' *S.A.C.*, LXXI (1930), pp. 171-204; see Table xii for reference to quernstones from Schiedam in 1396-97.

² *Op cit.*, fig. 2, nos. 7 and 8.

³ Drawings of lava querns, seen by courtesy of Mr. G. C. Dunning, indicate that there were variations in these types.

But it has now been established that slate, a rock foreign to Sussex, played its part in covering some at least of the buildings of the medieval village. Those buildings found in Field 7 east of the church were probably roofed entirely with slate.

A typical slate measures about 9ins. by 4½ins. by ¾-½in. thick, with a peghole near the top; the bottom corners are clipped off and there are usually traces of fine mortar on one or both sides. While the majority are of different shades of grey, there are many variations, including green.

Attention has already been drawn to the use of medieval roofing slate.¹ The present writer has since found ample evidence for its utilisation on medieval sites along the southern part of Sussex from Bosham to Rye, particularly near the ports.² It is not therefore intended here to pursue the subject in detail. It must be said, however, that the green slate (fig. 30, 6) thought at one time to have come from Fumay in the Ardennes³ is now considered more likely to be from South Devon probably as are the other slates.⁴

Fig. 30, 5. Blue-grey slate, average 0.45in. in thickness, traces of fine mortar on the underside (technically the 'bed', whereas the upper, rougher surface is the 'back'). The peghole appears to have been twice drilled, or this may be due to wear.

Fig. 30, 6. Green slate, average 0.45in. in thickness, mortar traces on both sides and edges suggesting that it was laid to a 2½in. lap. The bottom right-hand corner has suffered some damage.

Both slates are from Building 5 and are probably 14th century.

WHETSTONES

Schist Whetstones

Fig. 34, 1. Broken whetstone from Building 5, in depression between postholes 2 and 3 from which came slate, also late-13th, 14th and 15th century sherds. *A grey coloured, friable granulite or schist similar in composition to no. 2 but with a little amphibole present.*

Fig. 34, 2. Broken whetstone from Building 5, found in the filling of posthole 1 with iron knife (fig. 36, 23). *A grey coloured schist composed of muscovite, elongated grains of quartz with accessory iron ores, calcite and granular sphene. An apparently recent tufa or calcareous mortar adheres in patches to the surface of the specimen.*

Fig. 34, 3. Broken whetstone, light grey in colour as no. 2, found on top of the flints of Track 2 between base of lynchet and palisade, in association with oven tile fragments and late-13th century sherds. This stone would originally have been thicker, one face showing signs of splitting. *A quartz-muscovite-schist with amphibole.*

Fig. 34, 4. Broken whetstone, similar colour grey to no. 1, from top of flint tumble of west wall of Building 3, with c. 1250-1350 sherds. *A light coloured granulite or schist composed of muscovite, quartz, and a pale green amphibole. Limonite staining occurs, also accessory sphene, apatite and rutile.*

¹ 'The Use of Blue Slate for Roofing in Medieval England,' by E. M. Jope and G. C. Dunning, *Ant. J.*, XXXIV (1954), pp. 209-217.

² It is hoped that this will be published in future volume of *S.A.C.*

³ Dunning and Jope, *op. cit.*, p. 217.

⁴ I am indebted to Mr. J. Setchell of The Old Delabole Slate Co. Ltd., for examining and reporting on these and many other slates, also to Dr. J. Murray for geological information and for fieldwork in South Devon.

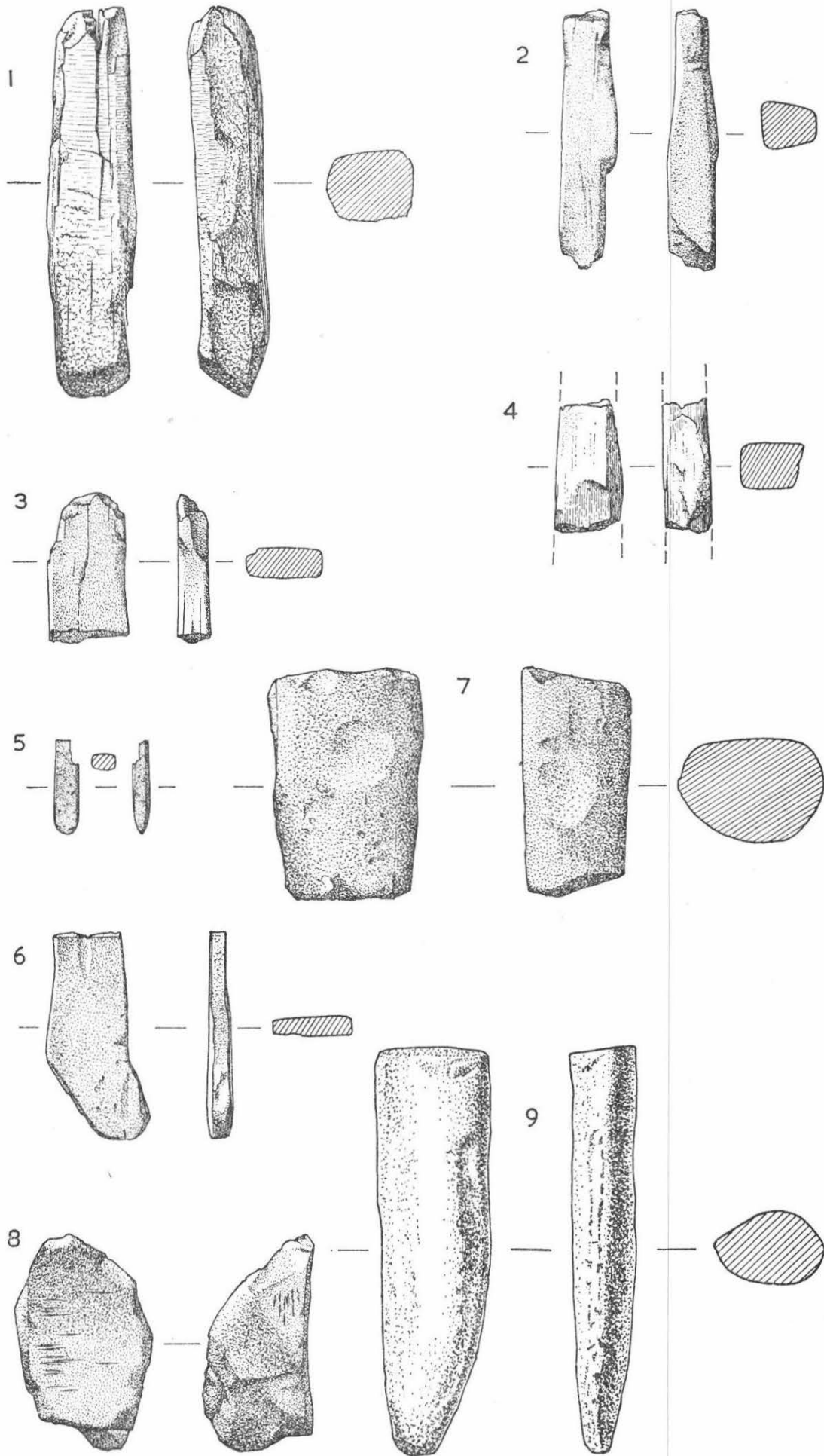


FIG. 34. WHETSTONES (±).

Fig. 34, 5. The smallest whetstone found; 0.45in. wide by 0.3in. thick, broken at one end. Light grey in colour as nos. 2 and 3. Found east of Building 3 close to palisade with late-13th century pottery. *A fine-grained quartz-muscovite-schist, slightly calcareous and without amphibole: otherwise similar to no. 3.*

Fig. 34, 6. Broken whetstone, at one time thicker. The colour of this specimen is darker than any of the above. Found with no. 1. *A grey coloured quartz granulite, slightly calcareous and with a considerable proportion of muscovite; iron ores, sphene and possibly chlorite are accessory.*

The schist and granulite specimens may have been introduced from a Scottish source if they are not foreign. A possible source might be a raised beach between Brighton and Worthing which contains a small percentage of igneous and metamorphic pebbles. J. Prestwich (Quart. Journ. Geol. Soc., XLVIII, 1892) lists pebbles of non-local origin which include mica-schist and granulite. He suggests that the blocks were carried on ice-floes and bergs either from Brittany or Scandinavia. Derivation from a Scottish source would not necessarily mean direct transport. The material could have been carried as erratics and deposited further north and then moved again at a later date.

There is sufficient weight of evidence for cross-Channel trade (which includes Caen stone for many Sussex churches), coupled with the wide distribution of schist hones throughout Southern England, to encourage agreement with the suggestion made in Mr. Dunning's paper that this material is most likely to have been traded from Brittany.¹ But as the Rhineland is mentioned by him as another probable place of origin it must be recalled that trade with Germany is represented at Hangleton by Mayen querns. There cannot, at this stage, be any certainty as to the provenance of these schist and granulite whetstones.

Of those whetstones recorded by Mr. Dunning there was little evidence of use in England after the 12th century, only West Woodhay, Berks., and Stonar hones being of 13th century date. The stones from Hangleton have extended the date to the late-14th and possibly the 15th century.

It is usual for schist hones to have a hole at one end for suspension by a thong. None of those at Hangleton were found to be so perforated, all being broken. A perforated schist whetstone has, however, been found in the parish of Hangleton² during the excavation of a barrow on Round Hill, $\frac{1}{4}$ -mile north of Building 3.³ This was 2ins. long and broken; sectionally 0.65ins. by 0.35ins., rounded at one end, near which was a perforation. Being found in the top layer with an ox-shoe of probable medieval date, it is more likely

¹ 'Twelfth-Century Middens in the Isle of Wight,' by H. F. Poole and G. C. Dunning, *Proc. Isle of Wight Nat. Hist. and Arch. Soc.*, II (1937), pp. 682-95. Also 'Excavations at the Jewry Wall Site, Leicester,' by K. M. Kenyon, *Reports of the Research Committee of the Society of Antiquaries of London*, XV (1948), G. C. Dunning, pp. 230-2. See also 'Late Saxon, Viking, and Early Medieval Finds from York,' by D. M. Waterman, *Archaeologia*, XCVII (1959), pp. 97-99, where grey, fine grained quartz mica granulite hones are described (fig. 23, nos. 1-5) the source of which could have been N.E. Scotland. It is there recorded that enquiries made in France for matching rocks were unsuccessful.

² *Proc. I.O.W. N.H. & A.S.*, II (1937), p. 686.

³ *Brighton and Hove Archaeologist*, III (1926), p. 36.

to belong to the Middle Ages than the Romano-British period of the barrow. Broken schist whetstones from Pevensey Castle which are similar in colour to the above are other known Sussex examples.¹

Whetstones other than Schist

Fig. 34, 7. A broken whetstone somewhat abraded, also weathered by exposure. From topsoil above Building 5. *A pinkish coloured medium-grained feldspathic sandstone with gritty or conglomeratic bands. A proportion of calcite occurs as a cementing medium for the quartz grains (up to 0.3mm. diameter), and there is accessory glauconite, chert and limonite. The presence of glauconite indicates that this is a local Wealden rock.*

Fig. 34, 8. An irregularly-shaped piece of stone, not dissimilar from some building stones used locally, found in the thin topsoil layer above the line of palisade postholes north of Building 3 with 13th century sherds. One face has been worn to a concave smoothness through continual rubbing. Numerous points have been sharpened on all faces of the stone. *A pale brown sandstone composed chiefly of rounded or slightly angular quartz grains (with 0.1mm. average diameter). Accessory minerals are iron ores, tourmaline and finely divided clay material. A proportion of limonite staining is present.*

Fig. 34, 9. This piece is one end of a bar whetstone such as is still used for sharpening scythes and hooks. The age is uncertain as it is a surface find from the bulldozed Parsonage House site. *A hard calcareous glauconitic sandstone similar to a specimen from the Lower Greensand Bargate Beds, near Midhurst, Sussex.*

Fig. 35, 1. Broken whetstone found in topsoil above S.E. room of Building 1. One face well worn. *A buff coloured fine-grained sandstone composed of rounded and angular grains of quartz (generally 0.1mm. in diameter). Accessory minerals are hornblende, epidote, leucosene, limonite, zircon and plagioclase feldspar. The grains are coated with small flakes of micaceous minerals.*

Fig. 35, 2. Found in topsoil above Building 8 with 13th-14th century objects. The end section of a broken whetstone of which all four faces have been utilised. The two sides have been reserved for blades while the two wider faces, having been hollowed a little by wear were then used for sharpening points. *A fine-grained calcareous sandstone which could have been derived from local drift deposits.*

Fig. 35, 3. A hard broken whetstone found with no. 3. This one has not worn hollow, all faces slightly convex as if used for sharpening scythes. *A buff coloured medium-grained feldspathic and micaceous sandstone. The rock is composed of quartz and a few chert grains (av. diam. of 0.5mm.). A little chloritic material is present, also iron ores, muscovite, tourmaline, feldspar and limonite staining.*

Fig. 35, 4. Irregular shape, very hard, with one flat surface showing gloss due to wear. Built into north wall of Building 3. This stone could have been picked up on the seashore. *A pinkish coloured arkosic sandstone composed of quartz grains (up to 0.4mm. diameter) cherty silica, orthoclase, iron ores, limonite and leucosene. A little limonite staining is present.*

Fig. 35, 5. A brownish-purple coloured very hard water-worn stone from the foreshore, found on floor inside Building 3. One face bears a gloss such as is produced by continual honing, also some faint scratches may be seen in the same place where the edges of knives would have marked the whetstone. *A quartzite composed of rounded and angular quartz grains in a quartzose and ferruginous cement. Accessory minerals are feldspar (microcline and plagioclase) rutile, apatite and iron ores.*

Fig. 35, 6. Another beach pebble found in the flint tumble of the south wall of Building 3. There is practically no gloss on this specimen; just sufficient to suggest that it has been utilised as a whetstone. *A dark-grey, banded, quartzitic*

¹ *Proc. I.O.W. etc. op. cit.*, p. 686. A fragment of schist, associated with medieval pottery was found at Botolphs in 1963 by Mrs. H. G. Holden.

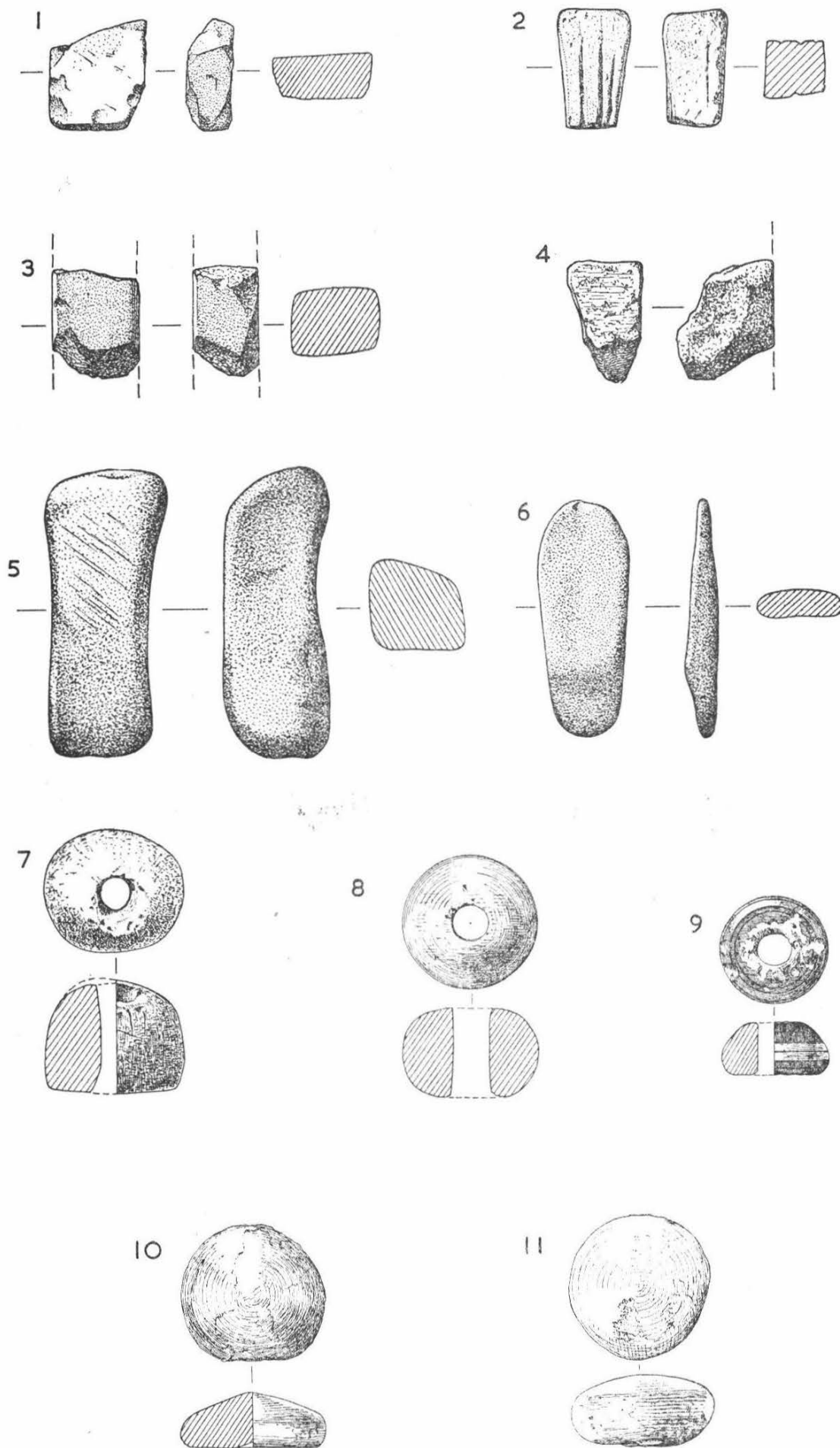


FIG. 35. WHETSTONES, SPINDLE WHORLS AND GLASS LINEN SMOOTHERS.
 (SCALES: 7-9, $\frac{1}{2}$, remainder $\frac{1}{4}$).

sandstone, composed of rounded quartz grains well cemented with siliceous and ferruginous material. Muscovite, biotite, sphene, rutile, zircon and iron ores occur as accessory minerals.

xvi. Broken fragment of a bar whetstone from Building 8, 2in. long, 2¼in. wide and 1in. maximum thickness, ovoid in section. Similar stone and shape to fig. 34, no. 9.

It is probable that sandstone and quartzite specimens could be matched among local gravel or erratic material. This is exemplified by the beach pebbles and Wealden sandstone. It adds to the evidence for the use of whetstones in materials other than schist.¹

SPINDLE WHORLS

Fig. 35, 7. Spindle whorl of hard chalk, found with 13th century sherds in Field 7, east of church during modern house building.

Fig. 35, 8. Spindle whorl of buff coloured stone, found near east wall of Building 3 with a knife (fig. 36, 12) and sherds dated c. 1250-1300.

Fig. 35, 9. Spindle whorl of buff coloured stone decorated with horizontally painted lines and bands in dark grey. From cutting S.W. of Building 1, with sherds dated c. 1250-1300.

Nos. 8 and 9 are fine-grained calcareous sandstones which could have been derived from local drift deposits.

It has been suggested that stone whorls are usually associated with flax and wooden to wool.²

OBJECTS OF GLASS

Window glass and pieces of bottles found in the Parsonage House have been described with the excavation.

Linen Smoothers

Medieval parallels to these bun-shaped glass objects are rare, but early examples are known from York and Mr. Waterman has seen one from Rievaulx Abbey, Yorks., which is presumably not earlier than c. 1128.³ Similar smoothers of Viking times from Perthshire and Chester are known⁴ the former having an upright piece of glass on the back. Some museums have examples with glass handles similar to a mushroom, labelled 18th or 19th century, but dated 13th-14th century smoothers appear to be almost unknown. The two found at Hangleton, one in a sealed layer, show that they were in use during those times. Both of these are without handles, the back of each being irregularly hollowed; the outer surfaces are an iridescent dark grey colour. While they may have been used for

¹ Which evidence was lacking in S.E. England (*Proc. I.O.W. etc. op. cit.* note 24, p. 690).

² R. Patterson in *A History of Technology II* (1956), p. 202. Flax and hemp were grown at Hangleton. *Inquisitiones Nonarum*, p. 385.

³ 'Late Saxon, Viking and Early Medieval finds from York' by Dudley M. Waterman, *Archaeologia*, xcvi (1959), pp. 59-106. Footnote 4 on p. 95 refers to O. Rygh, *Norske Oldsager* (Christiana, 1885) where these objects are well attested in Viking contexts.

⁴ H. Shetelig, *Viking Antiquities in Great Britain and Ireland*, II, p. 156 and IV, p. 69. This information was kindly provided by Dr. J. D. Bu'lock.

smoothing linen, Mr. J. G. Hurst informs me that in Denmark some archaeologists consider Viking period smoothers may alternatively have been used for dressing skins.

Three undated glass smoothers, each $3\frac{1}{8}$ ins. diameter and $1\frac{1}{4}$ - $1\frac{1}{2}$ ins. thick, from Pevensey Castle, Selmeston and Pulborough, Sussex, are in Barbican House Museum, Lewes. They resemble Hangleton no. 11 in being rounded on top and not conical as no. 10. The irregularity of the back of each one is similar to the Hangleton specimens.

Fig. 35, 10. Diameter $2\frac{3}{4}$ in., thickness $1\frac{1}{8}$ in. More truly shaped and conical than no. 11. From Building 1. Associated pottery is late-13th and early-14th century.

Fig. 35, 11. Diameter $2\frac{3}{4}$ - $2\frac{7}{8}$ in., thickness $1\frac{1}{8}$ in. Found in the bedding for the bottom layer of tiles below the oven floor in Building 3. On the basis of the pottery dating and possible sequence of building, this smoother may have been deposited below the oven floor during the latter half of the 13th century.

Mr. L. Biek kindly sent the glass smoothers to Dr. R. G. Newton of The British Glass Industry Research Association, Sheffield. We are grateful to Dr. Newton for the following information:

We think that a likely method of manufacture is to drop a gob of glass into a saucer-shaped depression, twist the tail until it becomes narrow, and cut it off with shears, the remnants of cooling glass then settle into the bulk rather like the way one can see on both linen smoothers. The iridescence on the surface is found as a result of weathering, rather than heating.

*We have identified about 650 separate layers in the weathered material of the larger object (Fig. 35, no. 11). We have also cut sections and the flow lines of the inhomogeneities in the glass can be seen easily by etching the surface. The lines of inhomogeneity in the glass are not necessarily parallel to the surface and we find effects similar to those described by F. Raw in *Jour. Soc. Glass Tech.*, June, 1955, pp. T 128-133.*

*We have found an unexpected amount of phosphate in the glass, but this would be consistent with the use of beechwood ash (Turner, *Jour. Soc. Glass Tech.*, XL (1956), p. 289 T).*

*Regarding the possibility of dating glass objects by the number of layers in the weathering products (Brill & Hood, *Nature*, 1961, Vol. 189, pp. 12-14), we have some doubts which can be summarised as follows.*

The reaction with water seems to take place in two stages. Close to the glass there is an extremely thin layer (200\AA) where the sodium ions are being exchanged for hydrogen ions. As this very thin layer advances into the glass it leaves behind it a partially-hydrated silica-rich layer through which hydrogen ions have to diffuse in order to react and sodium ions have to diffuse to get from the reaction surface to the outside. Initially it is this diffusion which seems to be the rate controlling process. Subsequently the partially-hydrated silica layer is further attacked by the water and this is a slower reaction than the ion exchange so the hydrated layer grows, at the same time being broken down into a porous structure as the silica dissolves.

The process is thus quite complicated but there is no denying the fact that visible layers seem to develop at a rate which apparently has corresponded to the number of years which have elapsed. Bearing in mind that a good proportion (5 out of 11) of Hood's samples were immersed in the sea or in damp soils, permanently under water, it seems remarkable that the layers might represent seasonal changes in the environment. At the moment therefore we are inclined to think that the production of the layers at the rate of about one per year is solely accidental and not due to a true annual effect.

The full analytical results on the linen smoother are set out below.

	Unaltered Glass (Core)	Altered Glass (Weathered Layer)	Altered Product calc'd (a) on anhyd. basis**	(b) on original silica basis (not %)	Difference
	%	%	%		
SiO ₂	46.5	37.6	42.7	(46.5)	
R ₂ O ₃	4.7	2.0	2.3	2.2	-2.5
CaO	21.6	20.0	22.7	24.0	+2.4
MgO	5.4	0.5	0.6	0.7	-4.7
K ₂ O	16.4	0.2	0.2	0.2	-16.2
Na ₂ O	0.7	0.1	0.1	0.1	-0.6
P ₂ O ₅	4.6	10.7	12.1	13.2	+9.4
SO ₃	0.4	0.1	0.1	0.1	-0.3
Loss at 550° C	0.3	21.0*	19.2		
	<hr/> 100.6	<hr/> 92.2	<hr/> 100.0		
Loss at 110° C	0.1	11.9			

* It is possible that much of the lime is present as the carbonate. If so complete decomposition would not be achieved at 550°C and this value is probably low.

** Calculated on the possibility mentioned in *, assuming a 'loss' value of 29.8%.

Preliminary results of X-ray microprobe examination kindly carried out by Mr. G. Shaw, by courtesy of Pilkington Brothers Ltd., have confirmed in detail the general picture indicated above, particularly with regard to the silica-rich weathering layer. They have, however, also quite clearly demonstrated a remarkable influx by way of cracks, of material rich in (particularly) manganese, presumably derived from the ambient soil. In the case of calcium, phosphorus and aluminium a certain degree of banded segregation had taken place along the direction of the weathering rings and certain cracks. This is in general agreement with the phenomena described by Geilmann in *Glastechn. Ber.*, 1956, Vol. 29, pp. 145-68.

Mr. L. Biek suggests that: pending closer examination, the exact number of layers would seem to lie between about 650 and 730. If, for whatever reason, there is a direct connection, then the date range (1220-1300) would be consistent with that obtained from the pottery.

The following note was kindly contributed by Mr. D. A. Derrett-Smith, Director of Research, Linen Industry Research Association:

Although we have no specific information, we should anticipate that the action of such a smoother differed fundamentally from that of the very hot iron now used. Linen materials are somewhat mouldable particularly when they are not too dry; consequently, rubbing with a smooth glass object under a reasonable pressure can, in time, give a smooth surface to the material. The glass smoothers may have been warmed, but, even if not, the heat generated by the friction could gradually drive the remaining moisture from the surface fibres which would then tend to become harder and glossier. Modern methods aim at a quicker softening, moulding and glazing of the surface without too much physical labour and they achieve this by using quite damp fabrics and an adequately hot iron.

BRONZE OBJECTS (i.e. made of a copper alloy—not analysed.)

Fig. 36, 1. Piece of rim and body of a cauldron made of thin sheet metal to which a patch has been applied internally, probably at the point of suspension. The patch is held in place by rivets cut from similar sheet, folded, with the points on the outside after the manner of a modern paper fastener. The top edge of the patch is folded over the cut edge of the vessel. The slope of the vessel as drawn is conjectural owing to the irregularity of the fragment. The curvature just

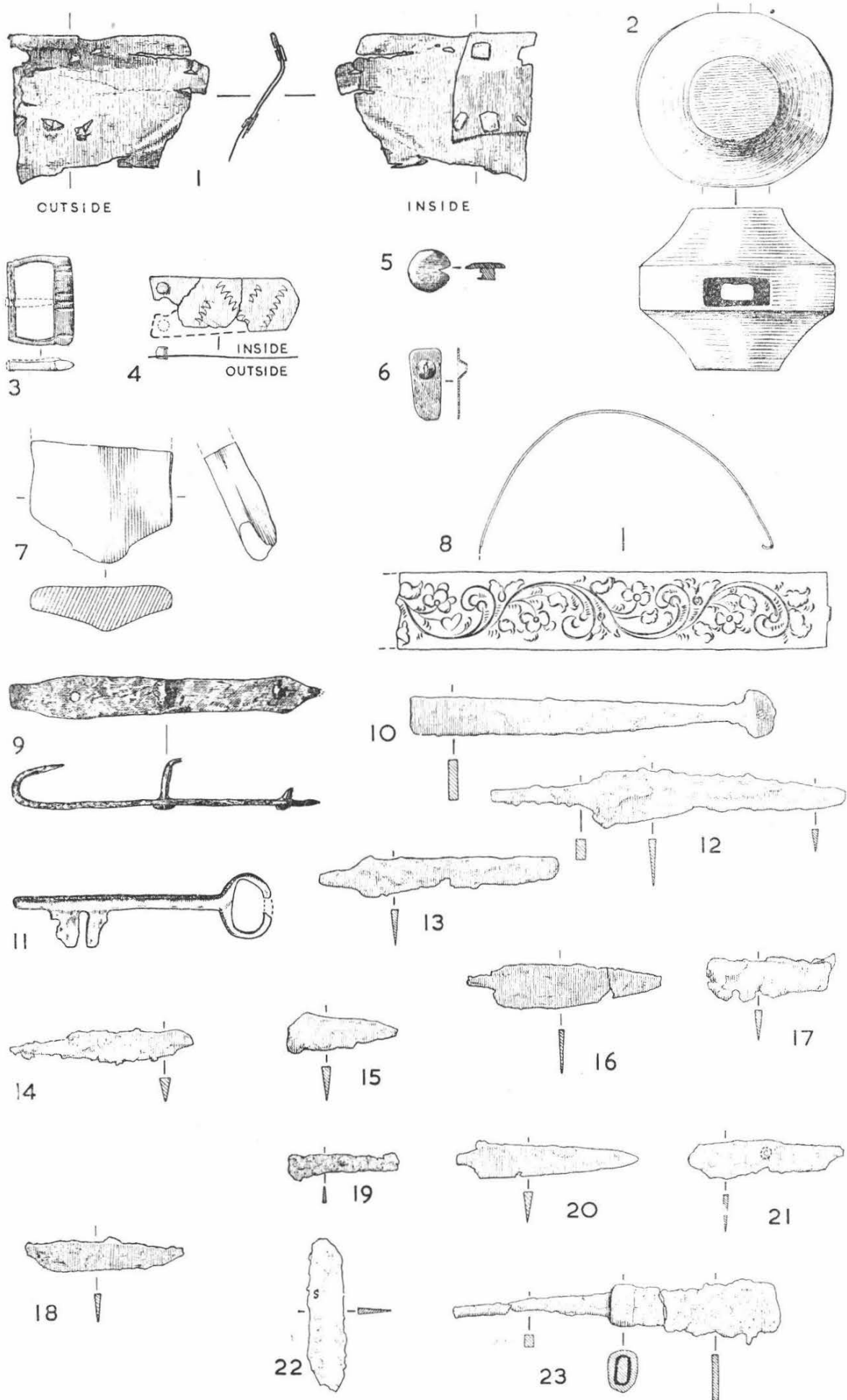


FIG. 36. OBJECTS OF BRONZE (COPPER ALLOY) AND IRON. (SCALES: 2-8, $\frac{1}{2}$, REMAINDER $\frac{1}{4}$).

below the rim would give a diameter of about 36in., but this is unlikely for a vessel with such thin walls. Damage and distortion of the metal before or after breaking could have caused it to be made much flatter than its true curve.¹ From Building 1, c. late-13th or early-14th century.

On both the inside and outside surface a considerable and fairly continuous film of 'soot' was found lying on the corrosion products. Its position, though at first sight perhaps unexpected, is in fact consistent with normal corrosion processes, the 'soot' layers having become separated from the original metallic surface on which they were formed—by corrosion products growing both inwards and outwards from this surface—and remaining substantially unchanged. The 'soot' on the outside was presumed to be due to fuel and not examined. Through the kindness of Dr. Craxford, the material removed from the inside was analysed in the infra-red spectrometer by Mr. P. Macdonald of the Fuel Research Station, D.S.I.R. (now Warren Spring Laboratory), by courtesy of the Director. The results are interpreted by Miss J. Holroyd of that Laboratory as indicating a complex mixture of heavily oxygenated aliphatic material with some hydroxyl groups. This is consistent with the presence of (animal) fatty residues. Such work is in the early stages and likely soon to yield more detailed answers. But even the present results are noteworthy for revealing these possibilities.

Fig. 36, 2. A cast, hollow sword pommel. Being small and quite light, it is probably from a small-sized weapon. There is a flattened space around the upper opening through which the tang passed, clearly visible, upon which a small pyramidal block of hard steel could be set to take the rivetted-over end of the tang and to form a hard base for it. This feature is common, though not universal, on pommels dating c. 1250-1350. Few pommels of bronze, latten or crystal were not furnished with such a block. The flattened area on top, may have had the tang rivetted down directly on top of it, for there are marks which may have been caused by the hammer when turning over the tang. The condition of this area however does suggest the impress of a block of hard metal (the blows of the hammer on the top in turning over the tang-end would inevitably make an impression) rather than the irregular edges of the burred-over rivet. The pommel has sustained three heavy blows; two have made considerable dents and one has actually penetrated through the metal, made by a pointed object. A common pommel of a type widely used between about 1250 and 1400, with its principal concentration seeming to be 1300-1350.²

The pommel can be closely paralleled with two complete swords from the Thames now in the Guildhall Museum. These are both 14th century and one has been dated by Sir James Mann to the latter part of the century. The pommel was found near the hearth in Building 5; among nearby pottery were some late-14th and 15th century sherds.

Fig. 36, 3. Strap-end buckle for a narrow belt, the pin missing. There are filed grooves in the upper surface. From Building 5.

Fig. 36, 4. Narrow belt chape, possibly associated with the buckle (no. 3). The upper end is shaped and perforated for rivets, one of which remains. When found there were faint traces of zig-zag rouletting on the outside. From Building 5.

¹ A medieval sheet bronze cooking pot in Bexhill Museum, from Northeye, Sussex (unpublished) measured only 7½in. and 6¾in. across the opposing axes. The vertical walls are 3in. high and there is a rounded bottom 1½in. deep in the centre, with a welged joint to the walls. Two perforated upstanding 'ears' of sheet for suspension are rivetted on opposing sides of the unseamed top edge and there is an internally patched repair. At one point the wall has been flattened approximately to the same amount of curvature as the Hangleton piece.

² Mr. R. Ewart Cakeshott kindly examined the pommel and furnished the above report. See also his book *The Archaeology of Weapons* (1960), pp. 224-5, where the pommel is shown as Type J. This type was occasionally used up to 1450 or 1460. Cf. Lon. Mus., *Med. Cat.*, fig. 5, no. 3.

In view of the interest in details of construction, aroused by similar finds made at Northolt,¹ Seacourt² and Wharram Percy,³ these fragments were submitted for X-ray fluorescence examination. It was of some importance to determine, in particular, whether certain areas now appearing dark on the 'inside' surfaces had in fact originally carried 'solder' which had disappeared since manufacture.

The results of the examination, kindly carried out by Mr. J. Sparks of Tin Research Institute, are given below. Incidentally, the overall composition was shown to be a medium 1:1 tin-zinc bronze. Although there is no definite evidence for solder, both tin and lead are, if anything, slightly higher inside than outside, and this would confirm the normal methods of assembly, as described for the similar pieces mentioned above.

ANALYSIS OF THE BELT CHAPE FRAGMENTS (A.M. 1942/3)

by J. Sparks, Tin Research Institute

X-ray fluorescence analysis was employed on two pieces of the belt chape, I and II. Both sides of part I were examined, but only the outside of part II was examined. The table gives relative intensities of the lines observed after correcting for slight differences in specimen size.

The Sn/Cu ratios correspond to bronze of about 5½-8% Tin. The Zinc concentration is also of this order. The Lead+Arsenic line suggests that the combined concentration of these elements is about 0.2%. I feel that the variation in Lead+Arsenic intensities in these specimens is too small to confirm any suggestions of solder.

	Sample I (1943)	Sample I	Sample II (1942)
	Inside	Outside	Outside
Tin	2250	1800	2160
Copper	36000	37800	32000
Lead+Arsenic	157	110	100
Zinc	3450	4040	2940
Silver	Not analysed		78
Nickel	”	”	60
Iron	”	”	150
Manganese	”	”	Not detected

Nos. 3 and 4 were found near the hearth in Building 5 not far from the sword pommel. They may be from a sword belt of early-15th century date,⁴ but could be from a civilian belt. Had they been connected with a sword it is probable that the steel blade would have survived in addition to the pommel. The ornamented end of the chape is similar to 14th century examples from London.⁵ Zig-zag rouletting is stated to be typical of the 15th century.⁶ A precise date cannot be given to the buckle and chape, but they are likely to be late-14th or early-15th century.

¹ *Med. Arch.*, V (1961), p. 291 f., fig. 76, no. 25.

² *Oxoniensia*, XXVI-XXVII (1961-2), p. 168 f., fig. 28, no. 5.

³ House 6. Information by courtesy of Mr. J. G. Hurst.

⁴ *Lon. Mus., Med Cat.*, p. 268, where is stated, 'soon after 1400 a new form of narrow sword belt came into use; and civilian belts with pendent tags went temporarily out of fashion.'

⁵ *Ibid.*, pl. lxxv, nos. 9 and 10.

⁶ *Ibid.*, no. A21792, p. 269 and pl. lxxv, no. 9.

Fig. 36, 5. A small rivet of uncertain use. From N. end of Building 5.

Fig. 36, 6. A small strip, curved at one end. There is a perforated depression for attachment to something else, probably a bifurcated rivet. From the central area of Building 5.

Fig. 36, 7. The bottom part of a cauldron foot similar, but not identical, to one found on the M.P.B. & W. site. The central rib on one side is characteristic of both. Found near the hearth in Building 5. *From a visual examination it seems that the metal is essentially a cast tin bronze, containing a fair proportion of lead. This may have been added to facilitate casting (though not necessarily) or possibly, though less likely, to increase the density—i.e., in effect the weight—to some extent.*

Fig. 36, 8. A piece of chase-decorated gilt bronze strip 0.8in. wide, broken at one end, the other having a small piece turned over. The latter could act as one half of a fastener, but the object is really too featureless to identify with any certainty. It has been dated by Mr. Tait of the British Museum to the middle of the 17th century if it were English. If it were German it could possibly be a little earlier. Being found in the Parsonage House cellar it has a terminal date of 1666.

IRON OBJECTS

There were numerous shapeless or undrawable pieces of ironwork representing no doubt parts of household and agricultural fittings.

Fig. 36, 9. Shutter hinge, neatly forged to a point, the other end being turned to fit over a ride. The clenching of one remaining nail shows that the boarding to which the hinge was attached was $\frac{3}{4}$ ins. thick. From Building 1, c. late-13th century.

Fig. 36, 10. Probably a broken strap hinge, but there is only one fixing hole in the lozenge-shaped end. Found near Building 3.

Fig. 36, 11. Key with oval bow, solid projecting shank and simple bit. It resembles no. 45, pl. xxxi, Lon. Mus., *Med. Cat.*, with the exception of the bow which is oval, not round. Associated pottery gives a late-13th or early-14th century date.

Fig. 36, 12-20. Knives with blades of triangular section, some still retaining the tang. Nos. 18 and 19 from Building 1, nos. 16 and 17 from Building 3, no. 20 from Building 8, nos. 12, 13 and 15 from cuttings outside of Building 3, no. 14 from a palisade posthole. Not datable closer than c. 1250-1350.

Fig. 36, 21. Broken knife blade in which there is a small hole. From Building 5.

Fig. 36, 22. Broken knife with blade of triangular section. Although not visible because of the products of corrosion X-ray photographs show a letter 'S' of non-ferrous metal, inlaid or onlaid near the upper edge of the blade. Found outside N.E. corner of Building 3 in topsoil with 13th-14th century pottery (Group 8).

Fig. 36, 23. Very corroded broken knife with tang. The iron collar of wood or bone handle has rusted on to the knife. The section drawing of the blade shows no cutting edge, which must be conjectural, the products of corrosion being so thick and rough as to obscure the exact shape. From Building 5, in filling of posthole 1 with schist whetstone (fig. 34, 2), c. 14th century.

Fig. 37, 1. Figure-of-eight loop with a swinging shackle at one end. As both ends of the loop show signs of wear it is probable that another figure-of-eight loop or another shackle was attached to the other end. An iron harness fitting from Llyn Cerrig Bach¹ has a small figure-of-eight loop with two shackles, the latter bent for the attachment of straps. Our example is more likely to be part of a draught chain consisting of a number of figure-of-eight links with a shackle at one, or both ends. It is well known that figure-of-eight links are free from the trouble of kinking. Such a chain for connecting animals to a plough

¹ Sir Cyril Fox, *A find of the Early Iron Age from Llyn Cerrig Bach, Anglesey*, (Nat. Museum of Wales, 1946), pl. xxviii, no. 56.

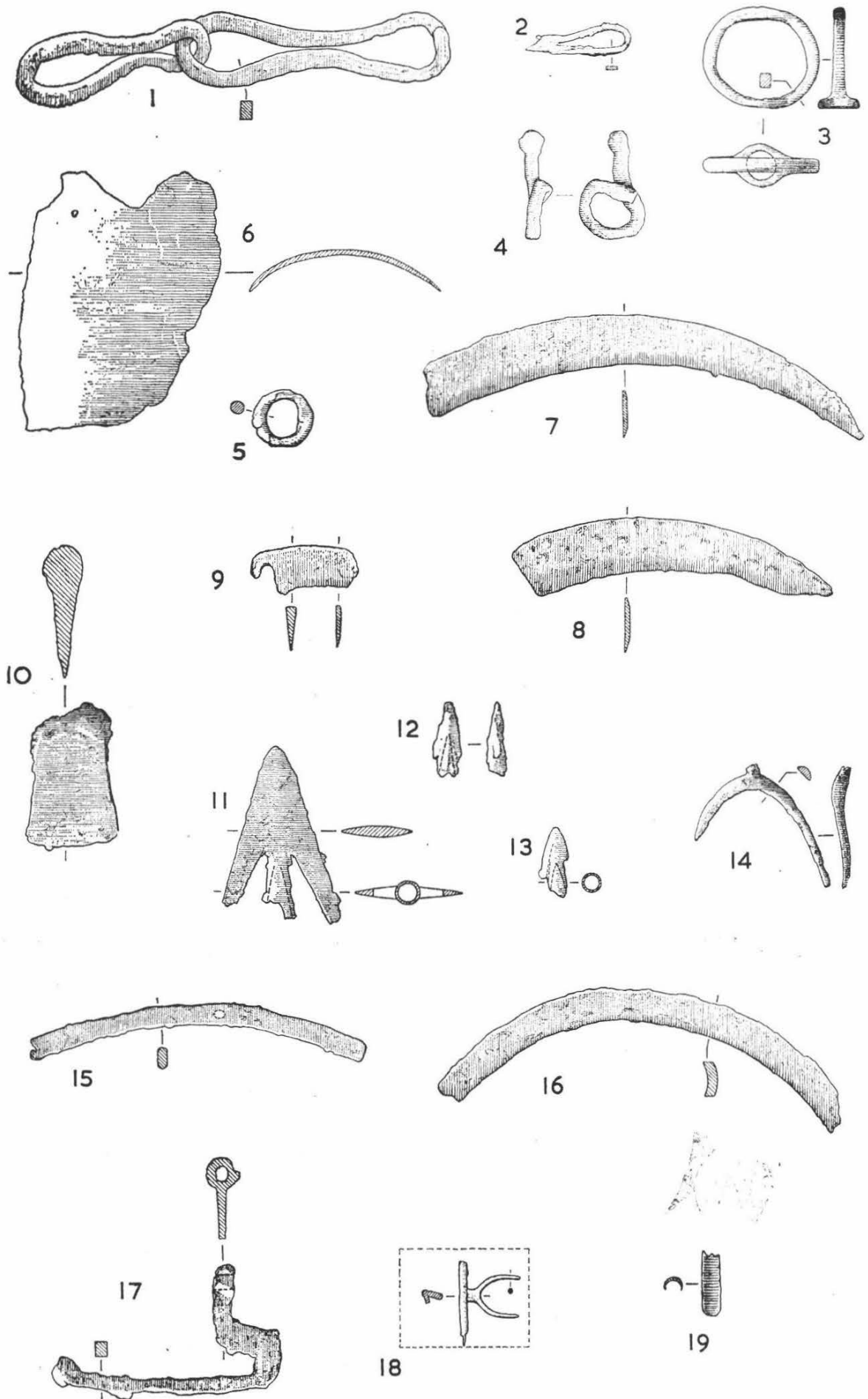


FIG. 37. OBJECTS OF IRON. (SCALES: 5, $\frac{1}{2}$; REMAINDER, $\frac{1}{4}$).

appears in an illustration of the early-14th century.¹ From Building 1, c. early-14th century.

Fig. 37, 2. Piece of a small figure-of-eight loop, much corroded, no sign of undue wear at the head of the loop. From near Building 3.

Fig. 37, 3. Oval ring flattened and perforated on one of the longer sides, the hole being bevelled inside. This was to allow for the attachment of a similarly bevelled piece of iron at the end of a chain or strap, thus enabling the strap to swivel. A similar, though smaller device will be found on a modern dog-lead. From Building 1, c. early-14th century.

Fig. 37, 4. An attachment for the end of a strap or chain to fit into a swivel ring such as no. 3, but smaller. From Building 8.

Fig. 37, 5. Small ring, $\frac{3}{8}$ ins. inside diameter (one of two found). From Building 1.

Fig. 37, 6. Broken curved plate, which is also curved 0.1ins. in length. The centre of the depression at the top of the drawing may be part of a hole. This piece of iron could be part of a reinforcing piece for a wooden draught pole or cart shaft. From Building 1.

Fig. 37, 7, 8. Broken sickle blades. There are no signs of a toothed cutting edge. Comparable with no. 1, pl. xxiii, Lon. Mus., *Med. Cat.* Both from Building 8, c. early-14th century.

Fig. 37, 9. One end of a curved draw-knife, the tang of which is broken. This instrument would be perhaps 12ins. long with two handles at right-angles to the blade. From Building 8, c. early-14th century.

Fig. 37, 10. Small axe-head, the top of which is too corroded to see the method of hafting. The size and bevelling on one face only suggests that this was a carpenter's tool. From Building 8, c. early-14th century.

Fig. 37, 11. Barbed and socketted hunting arrow-head somewhat similar to no. 30, pl. xv, Lon. Mus., *Med. Cat.* See also Hartley and Elliott, *Life and Work of the People of England*, I, pl. xii, (e) for similar arrow-heads dated to end of 13th century. From outside of Building 2.

Fig. 37, 12, 13. Barbed and socketted arrow-heads, probably of hunting type, corroded and broken. Similar to types 13 and 16, fig. 16, Lon. Mus., *Med. Cat.* (See also no. 15 in fig. 17 dated to 1241-63). No. 12 was found near the posthole complex S.W. of Building 3; no. 13 from floor of Building 8 with 13th-14th century sherds.

Fig. 37, 14. Broken spur, the terminals and point missing. The gentle curve of the sides seems to be characteristic of the period from the later-12th to the early-14th century. (Cf. Lon. Mus., *Med. Cat.*, fig. 31, 2-4).

Fig. 37, 15. Curved piece of flat-section iron with holes 3.75ins. apart. From outside of Building 3.

Fig. 37, 16. Curved piece, rounded on top and hollow below. This could have fitted to the slightly rounded rim of a wooden bucket although there are no signs of fixing holes in this piece. From Building 1.

Fig. 37, 17. Shaped piece, probably with the crank repeated on the opposite side. The object would then have two holes through which staples or a pin could pass. It can be compared with a chest or drawer handle that drops vertically when not in use, but there would not be much room for the fingers. It is more likely to be a harness fitting for the attachment of a strap. Found N.E. of Building 3.

Fig. 37, 18. Part of a 17th century iron shoe buckle from the upper level of the Parsonage House cellar.

Fig. 37, 19. Broken tip of carpenter's shell bit $\frac{3}{8}$ ins. wide, or end of a gouge. From Building 3.

¹ E. M. Jope in *A History of Technology* (1956), II, p. 90, fig. 55.

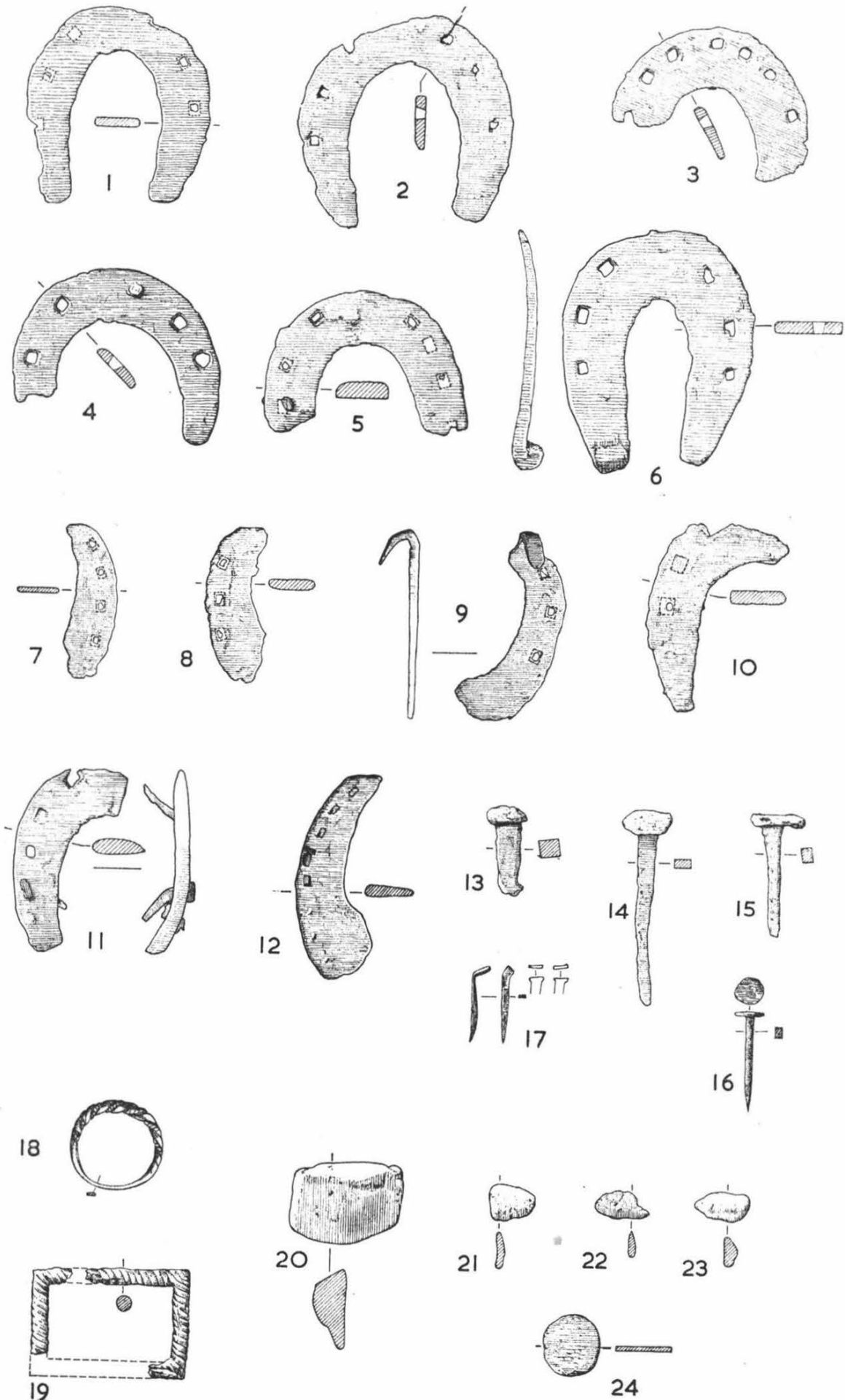


FIG. 38. OBJECTS OF IRON, SILVER, LEAD ALLOY AND LEAD. (SCALES: 18, 19, $\frac{1}{2}$; REMAINDER, $\frac{1}{4}$).

Fig. 38, 1, 2. Horseshoes without calkins, the holes slightly tapering. Of a light pattern or very well worn. Found on the chalk floor of Building 8. These shoes are similar to no. 232 from Winchelsea, dated c. 1280-1300, in Dr. Gordon Ward's ms. notebooks at Barbican House, Lewes.

Fig. 38, 3. Broken horseshoe found near 1 and 2 in Building 8. Comparable with Ward's no. 271, also from Winchelsea. No date given by Ward other than 'early,' i.e., c. 1300.

Fig. 38, 4. Horseshoe broken at one end, the other having no calkin. Head of nail remains in one hole, the holes being tapered. Found in upcast from sewer trench in Field 7, 13th or 14th century.

Fig. 38, 5. Broken horseshoe similar to, but heavier than no. 1, a rectangular section nail 1in. long still in one hole. From topsoil of Building 1.

Fig. 38, 6. Horseshoe of a heavier and broader pattern including the corroded remains of one calkin. This shoe is concave whereas the others are flat. The nail holes taper and are larger than those in the lighter shoes. It resembles fig. 36, no. 9, Lon. Mus., *Med. Cat.*, dated 1241-63. From the posthole area S.W. of Building 3.

Fig. 38, 7, 8. Broken ox shoes of simple type. No. 1 from Building 5; no. 2 found outside N.E. corner of Building 3.

Fig. 38, 9. Ox shoe with a turned-up calkin. From topsoil of Building 1, near the horseshoe (fig. 38, 5 above.)

Fig. 38, 10. Ox shoe, heavier than nos. 7-9, the front turned to afford more protection to the hoof.¹ From Building 5, c. 14th century.

Fig. 38, 11. Ox shoe, broken at tip, but otherwise as no. 10; rectangular section nails remain in the shoe.¹ From posthole 3, Building 5.

Fig. 38, 12. Ox shoe from lower part of Parsonage House cellar found with 17th century objects.

Fig. 38, 13. The head and part of the square shank of the largest nail found. From Building 5.

Fig. 38, 14, 15. From Building 5. Three similar nails up to 4ins. long with slightly smaller heads came from Building 1.

Fig. 38, 16. Typical of nails from most cuttings associated with the buildings. The shank is rectangular and varies in length. The head is between $\frac{3}{8}$ ins. and $\frac{1}{2}$ ins. in diameter, c. late-13th to early-14th century. One nail from the floor of Building 3 shows clear remains of largely mineralised wood, with the grain running at right-angles to the shank.

Fig. 38, 17. Eighteen nails from the floor of Building 3, several being bent. Rectangular in section and tapering to a point they are distinguished by the absence of flattened heads. Some had the vestige of a head similar to a modern cut-clasp nail, but without the triangular top. Several are in good state of preservation: c. late-13th to early-14th century. Some of these nails were examined visually and X-radiographically and the significant details of two specimens are listed below.:

(a) 'Uncorroded'—with a hard glossy dark, essentially bluish-black surface with a reddish tinge (? skin); the appearance is similar to that of objects either known to be, or usually, associated with the effects of fire, where these have been completely protective. At the tip are remains of unburnt mortar.

(b) 'Corroded'—with part of bright red skin remaining in 'unaffected' parts. A different effect usually associated with fire, where this has been only partly protective.

Most of the nails were broken or too corroded to determine exactly their original shape and length, but there were sufficient to show that the most common was as no. 16 above. Large nails were rare. Nos. 13-15 were found with late-14th and 15th century pottery.

¹ It may be that these are broken horseshoes. Ward says that ox shoes are not concave and these are concave.

SILVER OBJECT

Fig. 38, 18. Silver-gilt finger ring of which the greater part of the gilding has disappeared. The ring was found on the chalk floor of Building 3 between the oven and the S. wall with late-13th and early-14th century pottery. It was probably lost late in the life of the building, say about 1325. The ring is similar to those of Saxon type of the 10th and 11th centuries (see *B.M. Cat. of Finger Rings*, e.g. p. 36, no. 215c). While not impossible, it is unlikely that a ring 300 years old would be owned by a peasant. A similar type of ridged and pearled hoop is often found in 15th century rings but with a flattened bezel (*ibid.*, pp. 111-9, nos. 750 and 758). The context suggests that the ring is a derivative of the Saxon type, but there is always the possibility of a Saxon ring having been found and kept as a curio.¹ The Roman coin from Building 1 is an example.

The object was kindly examined by Mr. P. Ainsley, using the X-ray fluorescence spectrometer at the Research Laboratory for Archaeology, Oxford (by courtesy of the Director). Gold was confirmed, although no attempt was made to decide how much was present in the silver (also confirmed, as main constituent) as opposed to the visible remains of gilding. In addition, significant quantities of mercury were detected, suggesting that 'fire gilding' was employed. Microscopic examination has shown that the ring was skilfully wrought by S-twisting the decorated portion in simple four-ply fashion from a pair of single and a pair of double rods. A single rod alternates with a rather narrower double one in each case. Each double rod is itself prepared by S-twisting two yet narrower single rods to a gentler pitch, and hammering the assembly right up on itself so as to produce in effect almost a new solid bar, about twice as thick: but the twist has not quite closed the junctions between the two rods and a beaded effect results. The decorated portion was almost certainly soldered to the residual, plain arc although evidence of the joints has been skilfully concealed.

LEAD ALLOY and LEAD OBJECTS

Fig. 38, 19. Single buckle, the pin of which would have swivelled around the part of the bar now missing. From outside the S.W. corner of Building 3. *The buckle is made of a lead-containing alloy sufficiently hard to suggest the presence of a fair proportion of tin, primarily (although small quantities of other metals will have a hardening effect). There is no trace on the remaining parts of the bar to suggest the material of which the pin might have been made; this might indicate that the buckle was broken and the pin missing before burial.*

Fig. 38, 20-23. Fragments of lead, of which there were three pieces (nos. 20-22) from the floor of Building 1 and one piece (no. 23) from outside the E. wall of Building 3. *The three smallest fragments are almost certainly residues of metal solidified from molten droplets. The largest fragment is evidently part of a cast shape (which solidified with its flat surface uppermost). The marks around the edges represent in part, perhaps, abandoned attempts at cutting; for the rest, probably scratches for testing, or without significance. The two smooth edges would appear to have been cut.*

Fig. 38, 24. Lead disc from Building 1. *It has clearly been worked from sheet; no significant markings are immediately detectable. Its weight is about ¾oz. (19.94g.) but does not seem significant in terms of either type of grains.*

BONE OBJECTS

Fig. 39, 1. A small knob or finial 9/16ins. long, ¼ins. diameter, hollowed below. Perhaps the decorative terminal of a spoon. From Building 3, found with late-13th and early-14th century pottery.

¹ Mr. R. Merrifield kindly advised on the ring. There are two gold rings in the British Museum made from thick twisted wires which come from sites in Sussex, both now listed as D.M.V.'s, viz. Bormer or Balmer (TQ/359100), ref. 53, 4-12, 71 and Hamsey (TQ/414122), ref. R.C. 215a.

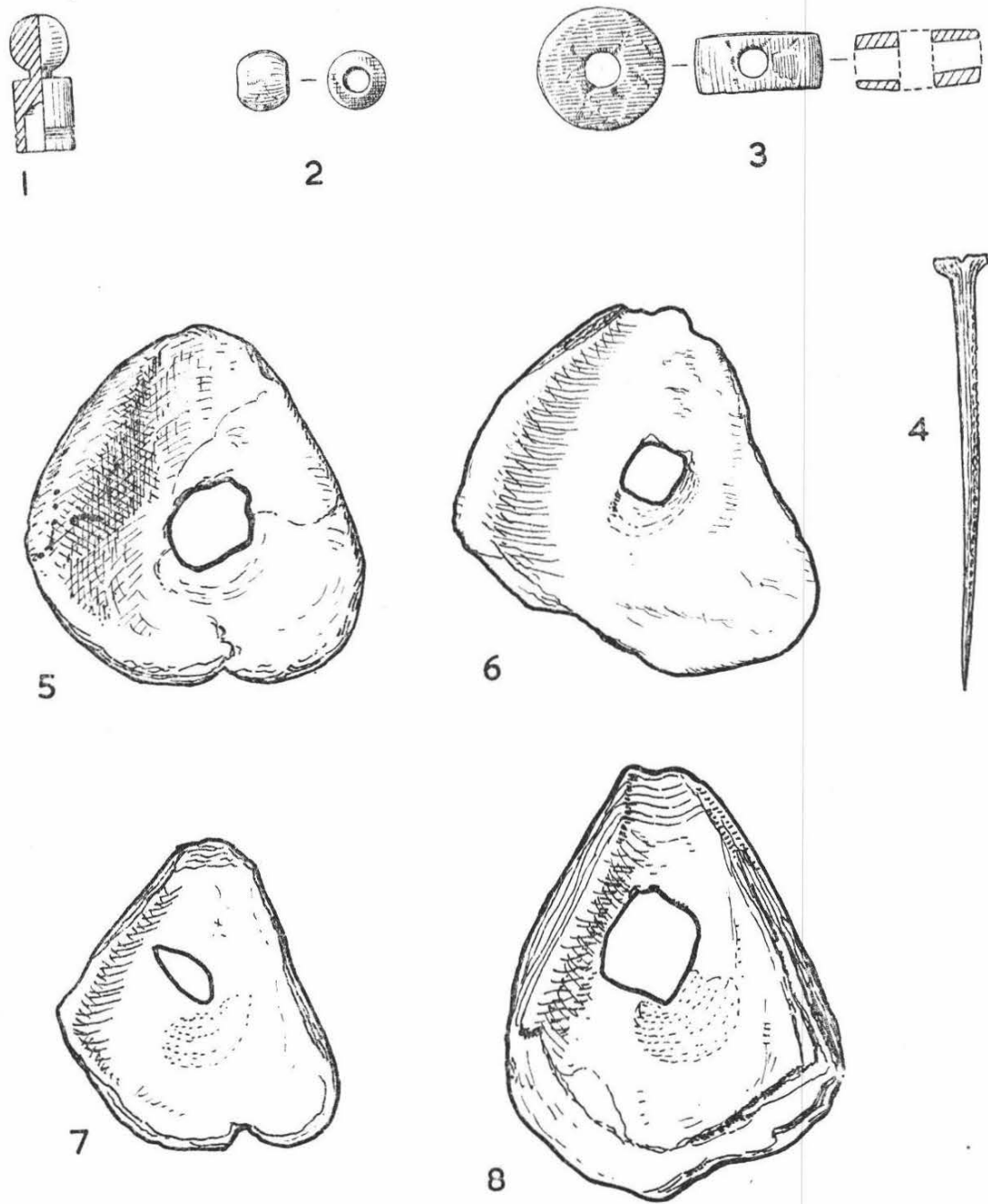


FIG. 39. OBJECTS OF BONE AND SHELL. (SCALES: 1-4, $\frac{1}{4}$; 5-8, $\frac{1}{2}$).

Fig. 39, 2. A single bead $\frac{1}{4}$ ins. diameter. Slight traces of polish still present. From Building 1, c. late-13th century.

Fig. 39, 3. Found with 2. A plain disc, $\frac{1}{2}$ ins. diameter and $\frac{1}{4}$ ins. thick, perforated in both directions. This could have formed the central bead of a necklace, the second hole being for a pendant. Originally the bone was polished.

Fig. 39, 4. A marine fish-spine probably used as a pin. Found under the buttress wall in Building 3.

COINS

- i. As of Domitian, 81-96 A.D. Found inside Building 1.
- ii. Silver penny of Edward III. Fourth coinage Pre-Treaty period, Series 'C,' struck c. 1351-2. Ecclesiastical Mint of Durham. The coin shows signs of wear. Found near Building 3.
- iii. Very worn silver penny of uncertain date, struck possibly between 1344 and 1414. From Building 5.
- iv. Coin weight, for weighing the 22s. gold Unite of James I, 1603-25. From inside of Parsonage House against E. flint wall.

ANIMAL REMAINS

Bones were fairly plentiful, but nearly all are in such a fragmentary state that a statistical approach would be useless. Doubtless most of them represent the remains of meals. The majority of bones capable of being assessed for age are from mature animals, which suggests that animals were killed and eaten after they had performed a useful function. This supports the suggestion that Sussex sheep were reared primarily for their wool and not for food.¹ One aspect of Dr. Pelham's survey may be amplified.² It is there pointed out that Gilbert White, writing in 1773,³ drew attention to a difference in breed between sheep grazing on the two sides of the River Adur.⁴ West of the river all sheep then had horns, whereas those to the east were hornless, the latter yielding better quality wool. The shepherds told White that this had been so from time immemorial. The wool from East Sussex in the 14th century being superior to that from the western half of the county⁵ it was reasonable to suppose that the sheep at that remote period east of the Adur would have been hornless. The presence of horn-cores at Hangleton now demonstrates that horned sheep were not confined to West Sussex in the Middle Ages.

¹ 'The Distribution of Sheep in Sussex in the Early Fourteenth Century,' by R. A. Pelham, *S.A.C.*, LXXV (1934), pp. 128-135. Dr. Pelham also refers to 'The Pastoral Custom and Local Wool Trade of Medieval Sussex, 1085-1485,' by Miss A. M. Melville. *Unpublished thesis, Univ. of London Library* (summarised in *Inst. Hist. Res. Bull.*, X (1932-3), pp. 38-40), wherein is stated that there was no large-scale autumn killing as is generally supposed, the animals being kept in sheep-cotes or folded on fallow land during the winter. Cf. *S.A.C.*, LIV (1911) p. 134.

² R. A. Pelham, *op. cit.*, pp. 132-4.

³ Gilbert White, *Natural History of Selbourne*, Letter xvii.

⁴ Shoreham is at the mouth of the Adur, Hangleton is four miles E. of Shoreham.

⁵ Miss Melville, *op. cit.*, p. 100.

The absence of rabbit bones was unexpected, downland being a popular breeding ground for the animal.¹ Despite the written reference to eggs no chicken bones were found.

Mr. H. T. Brazenor of Brighton Museum kindly furnished the following report on animal bones and mollusca.

Animal Bones

Ox Remains of this animal are abundant, but in common with nearly all the other bones are much broken. There are several horn-cores, fragments of frontal bone, fragments of lower jaw and teeth. Most of the remains suggest animals of small type with small horns.

Horse A fair number of fragmentary bones, teeth, and one fairly complete half of the lower jaw. As with the ox remains, most of the bones are from animals of small type.

Sheep Plentiful remains of sheep are present including many teeth and broken mandibles. There are a number of horn-cores.

Goat Remains of goat are indicated by a few horn-cores. No other bones have been discovered but it is likely that there are fragmentary remains which cannot be separated from sheep.

Pig A good number of remains of this animal including fragments of skull, mandible, and teeth. There is no bone complete enough to indicate the type of pig although some must have been animals of fair size.

Dog A few teeth and a fragment of upper jaw are from a dog of fair size, probably of similar build to a medium-sized Labrador.

Rabbit One femur is the only bone identified. This could be a later intrusion, rabbits being common in the area until 1953.

Black Rat One half lower jaw of a very small specimen. The condition of the bone suggest that this is fairly recent and probably has worked down during excavation.

Goose A solitary leg bone was found in Building 8.

MOLLUSCA

<i>Marine</i>	Oyster, <i>Ostrea edulis</i> . (Linn.) Plentiful.
	Mussel, <i>Mytilus edulis</i> . (Linn.) Moderate quantity.
	Pecten, <i>Pecten maximus</i> . (Linn.) Moderate quantity.
	Cockle, <i>Cardium edule</i> . (Linn.) Moderate quantity.
	Winkle, <i>Littorina littorea</i> . (Linn.) Scarce.
	Whelk, <i>Buccinum undatum</i> . (Linn.) Scarce.
	Small bivalve, <i>Tellina balthica</i> . (Linn.) Scarce.
<i>Land</i>	Common Snail, <i>Helix aspersa</i> . (Muller)

Perforated Oyster Shells (Fig. 39, 5-8)

Of the many oyster shells four were perforated, but why this had been done is not known. Nos. 5 and 7 each have a notch in the edge of the shell which could be from the friction of a cord. No. 8 from the Parsonage House cellar may be an intrusion as medieval sherds were found on the surface nearby, but the practice of perforating oyster shells may have persisted into the 17th century. Assurance has been obtained from an ornithologist that the holes could not have been made at the oyster beds by birds. No. 5 came from Pit E, nos. 6 and 7 from the palisade line near Building 3.

¹ Rabbit skins were exported from Sussex in 1398-9. *S.A.C.*, LXXI (1930), p. 197. A Hangleton taxpayer in 1327 was named 'Cony' (Subsidy Roll). The 1340 Nonae Return records a complaint against rabbits having devoured wheat at West Wittering, and Ovingdean had 100 acres arable annihilated by the destruction of rabbits. *S.A.C.*, I (1848), p. 62.

CHARCOAL AND COAL

The specimens were kindly identified by Mr. R. A. Kennedy, then Assistant Curator, Brighton Museum.

Building 1 Beech, buckthorn, guelder rose, hazel, oak, poplar, spindlewood.

Building 3 Beech, cherry, guelder rose, hazel, oak, poplar and a small piece of coal.

Building 4 Buckthorn, poplar.

Building 5 Beech, cherry, poplar.

Building 8 Beech, buckthorn, guelder rose, hazel, poplar.

Trial trenches S.W. of Building 1 Elm, poplar.

Pit E Beech, oak.

15th Century posthole near Building 4 Dogwood.

The following notes were written in conjunction with Mr. Kennedy:

The quantity of charcoal recovered was very little in comparison to the large areas excavated. With the exception of a few specimens of poplar the charcoal represented timber of small size, much of it 'scrub.' The poplar which occurs in every building would almost certainly be aspen (*Populus tremula*) which is the only native British poplar to grow in woods on the superficial deposits over the chalk (e.g. clay-with-flints) or in woods on the coastal plain.¹ All other native British poplars are plants of wet woods and stream sides, which conditions exist only at a distance of several miles from Hangleton, such as in the Weald N. of the Downs, or alongside the Adur. It should be noted that poplar was one of the charcoals found in the only other recorded excavation in Sussex of a small late-13th century medieval downland dwelling, that of Bramble Bottom, near Eastbourne.²

There is no certainty that the charcoals represent only the remains of fuel, e.g. some small stakeholes near the mouth of the oven in Building 3 contained pieces of oak charcoal. Poplar is not a timber usually to be associated with fuel for it is known to be reluctant to burn: it could be from utensils or furniture. Nevertheless, the recurrence of poplar charcoal throughout the buildings suggests that some of it may have been used as fuel. Poplar was demonstrably the best of the charcoals such as one would expect if it had been made into charcoal specially. Mr. Kennedy has carried out experiments with poplar in a modern domestic stove of the type with glazed doors and a totally reducible draught. He found that provided sufficient heat was present initially, when stoked with poplar under reducing conditions (i.e. without any draught) it converted to charcoal and continued to burn as such, producing a great heat. This

¹ Mr. D. T. Streeter of the Department of Botany, Queen Mary College, Univ. of London, kindly confirmed that the poplar was most likely to be *Populus tremula*. There were 8 acres of wood in Hangleton—Benfields manor according to the 1325 Inquisition Post Mortem (*supra.*, p.62).

² *S.A.C.*, XCIII (1955), p. 170. Mr. Streeter draws attention to poplar being found by Dr. Curwen at the prehistoric sites of the Trundle, Cissbury and Thundersbarrow; also by G. A. Holleyman from the R.B. site at Highdole Hill, near Telscombe, all Sussex downland situations; see H. Godwin, *History of the British Flora* (1956), p. 216.

suggests that poplar charcoal may have been used for cooking, or possibly, its property of burning efficiently with a limited supply of air could have been utilised at night when the fires would be damped down under curfews, a pottery fragment of which was found on the site.¹

The presence of a tiny piece of coal on the floor of Building 3 is further evidence, as yet scanty, that coal found its way into Sussex during the late-13th century and early-14th centuries. Fragments of coal were found at Bramble Bottom.² Another piece of coal was discovered in an undisturbed 13th-14th century context at Bramber.³ There is recorded the importation into Sussex in 1323 of sea coal valued at £4 10s. 0d.⁴ A few months later sea coal to the value of £2 0s. 0d. is exported,⁵ both shipments being by aliens. Dr. Pelham infers that, as there is no local supply in Sussex, available charcoal supplies being adequate for local needs allowed the sea coal to be re-exported.

MORTARS by L. Biek

Samples were provided by the excavator from the walls of Buildings 1, 3 and 4. They were analysed by W. E. Lee and E. S. Cripps, together with similar samples provided by Mrs. D. G. Hurst from her adjacent excavation⁶, by acid dissolution of the lime-component and grading of the insoluble aggregate in the usual way. Samples of sand and gravel from the foreshore at Hove, and from the sea bed off the Isle of Wight, as well as from the 'Clay-with-Flints,' near the site, were also sent by the excavator for comparative purposes, and were examined visually and graded along with the others. The detailed report is deposited in the records of the Ancient Monuments Laboratory, and at Barbican House Museum, Lewes. A short summary of the results is given below.

In view of the suggestion that sea sand and gravel had been used, the two principal points of interest related to the general variability of grading that might be found in relation to differences between buildings, and to any residual salinity that might be present. The gradings showed two of four samples from Building 1 to be virtually identical, another one to be very similar, and the remaining one also similar. The single sample from Building 3 was somewhat different, being rather more sandy (though still quite low in the sand fraction, with some 17%), but had the same general distribution. A sample from a feature associated with Building 1 was also similar in this respect, but contained less coarse material and far more sand (25%) and fines (15%, as against 3-8% for the other samples from Building 1). This might be related to contamination with finer material from washdown during burial. The single sample from Building 4 was intermediate between the last-mentioned material and the other samples described; it was really quite distinct from them all,

¹ The identification of poplar has been confirmed by Dr. G. W. Dimbleby, Dept. of Forestry, University of Oxford, samples from Buildings 1 and 5 being selected for this purpose. We are greatly indebted to Dr. Dimbleby for much help and advice.

² *Op. cit.*, Dr. J. Wilfrid Jackson here states that it cannot be said where the coal might have come from. Erratic boulders of coal, granite, etc. have been found in the chalk.

³ *Sx. N. and Q.*, XV (1961), p. 239.

⁴ 'The Foreign Trade of Sussex, 1300-50,' by R. A. Pelham, *S.A.C.*, LXX (1929), pp. 93-118; Table vi.

⁵ *Ibid.*, Table vii.

⁶ *S.A.C.*, forthcoming.

though still of the same general nature, but it was almost identical with two of the three samples sent by Mrs. Hurst. It is interesting to note that the two latter were visually appraised as distinct by the excavator, whilst the third, considered to resemble one of the two, could from its analysis not be related to any of the material here described.

As far as the proportions of lime to sand-and-gravel can be used in this way, the close similarity between three samples from Building 1 is confirmed, with the fourth sample differing slightly but comparable, again, to the material from Building 3. In this respect the feature associated with Building 1 was far more closely related to the group of three from Building 1, and this might argue against contamination, suggesting rather that the distinction in grading (being more significant) is in fact real. The material from Building 4 is, again, intermediate. All groupings mentioned so far cut right across minor distinctions based on visually appraised chalk and/or unburnt lime fragments up to $\frac{1}{4}$ in. cube and such distinctions have therefore been ignored. Of the comparative material the 'Clay-with-Flints' could obviously not have been the source of any of the materials, lacking any significant 'middle' fractions altogether although it did contain about 4% of chalk fragments up to $\frac{1}{4}$ in. cube. The material from Hove had a grading almost identical with that of the sample from Building 3, and clearly similar to the bulk of samples. The material from the Isle of Wight matched Mrs. Hurst's pair, and the sample from Building 4 on all counts except the medium coarse (+20) fraction; such a difference may well be more significant than the similarities within this particular group.

There was no noticeable salinity remaining in a representative sample from this site, as against material from Roman sites in Hampshire and Wiltshire, and a medieval one on the Thames in London, where a trace was found. The sample from the Isle of Wight, supposedly washed for supply to the building trade, was just as contaminated with salt (chloride) as the material fresh from the foreshore at Hove.

In the absence of other analyses, no conclusive comment can be offered at this stage; this matter clearly deserves further attention. There seems little doubt that all the aggregates used on both sites could have come from marine foreshores; to that extent the immediate visual appraisal is borne out by the results of the grading. The consistency within the buildings is also remarkable, but whether any closer interpretation is justified remains to be seen. The use of naturally saline material is puzzling. The results may indicate that thorough washing took place; this would account also for the relative dearth of fines. On the other hand, it should be remembered that salinity is a particular scourge in stone and brick, and similar 'porous' masonry. In flint buildings it may have been found relatively innocuous.

For Wiston in Sussex there is an entry in the Reeves' Account Rolls for 1357 under the heading 'Cost of Buildings': '*In sea sand bought 3s. 4d.*'¹ Lime also figures in the Reeves' Accounts. The superior quality of local sea sand used in building must then have been apparent because there are extensive deposits of land sand close to Wiston, whereas the shortest land route to the seashore involved a round trip of twelve miles. Even had the River Adur been used for the conveyance in boats of sand from Shoreham to Bramber and thence by road to Wiston the labour involved in transporting the material would have been greater than that expended on acquiring local supplies. The grading characteristics of the Hangleton mortars are shown in Fig. 40.

¹ 'Rolls of the Manor of Wiston,' by Rev. W. Hudson. S.A.C., LIV (1911), p.152.

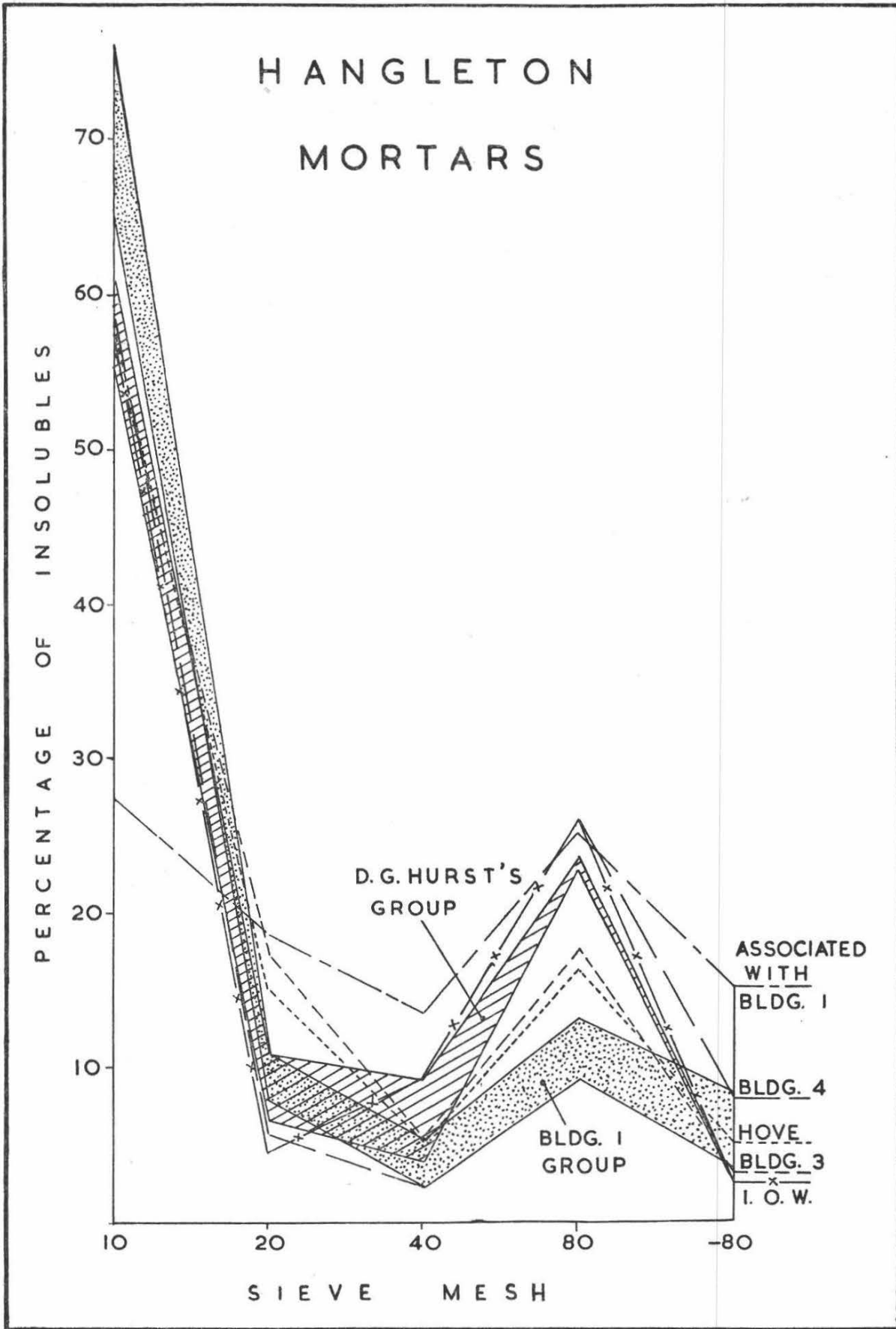


FIG. 40. GRADING CHARACTERISTICS.