EXCAVATIONS ON THE SITE OF ST. MARY'S HOSPITAL, STROOD*

By A. C. Harrison, B.A., F.S.A.

Newark Yard, Strood, has long been known as the site of the hospital founded by Bishop Gilbert de Glanville in 1193—indeed the name 'Newark' is a corruption of the 'new work' (*novum opus*) of the Bishop. When, therefore, in the summer of 1966 the area was cleared of the existing buildings, which were possibly of seventeenth-century date, the Lower Medway Archæological Research Group undertook an excavation at the suggestion of Mr. S. E. Rigold, M.A., F.S.A., with the object of establishing, if possible, the plan of the building. As time was limited, a mechanical excavator was used to remove the later floors and foundations which overlaid the medieval remains.

Permission for the excavation was given by the landowners, Messrs. Second Covent Garden Property Co., and financial help was given by the Ministry of Public Building and Works, the City of Rochester and the Kent Archæological Society, to all of whom grateful thanks are due. The work of the excavation was carried out by members of the Lower Medway Archæological Research Group and by boys of Sir Joseph Williamson's Mathematical School, and my thanks are due to them, and in particular to the following for their sustained support: Mrs. P. Day, Miss M. Webster, Messrs. I. J. Bissett, R. E. Couvès-Clark, J. Cruse, D. Leech, H. V. Summerton and M. J. E. Syddell. I am especially grateful to Mr. A. P. Detsicas, M.A., F.S.A., for drawing Figures 3 and 4, Mr. R. G. Foord for undertaking much of the photography and supplying the prints, Miss R. Powers of the Sub-Department of Osteology, British Museum (Natural History), for supplying information on the human remains, and Mr. S. E. Rigold, M.A., F.S.A., for reading through the original draft of this paper and making many valuable suggestions. Above all, thanks are due to Messrs. T. Ithell, B.Eng., and P. J. Tester, F.S.A., who not only undertook all the survey work but gave invaluable help in every way throughout the excavation. Mr. Tester was also responsible for Figures 1 and 2.

History

The Hospital of the New Work of St. Mary was founded by Gilbert de Glanville, Bishop of Rochester, and the foundation must date from

* The Ministry of Public Building and Works contributed to the cost of printing this paper.

1192–3, as he states in his foundation-charter that he had in mind the restoration of Christianity in Jerusalem and the liberation of King Richard.[1] He granted to it the churches of Aylesford, Halling, Strood and St. Margaret's in Rochester and a liberal endowment from tithes in the nearby villages.[2] The foundation was confirmed by Richard I in 1193, who, the following year, himself made it a grant of woodlands in Malling, and again by Edward III in 1332. According to the original constitution there was to be a Master, two priests, two deacons and two sub-deacons.

From the start there was hostility between the Hospital and the monks of Rochester Priory[3] who resented the diversion to it of what had been part of their revenues. During the thirteenth century they made several attempts to recover these, and in 1256 the church of Aylesford was restored to them by a decision of Pope Alexander IV. This hostility was the cause of what was virtually a pitched battle in 'the Archyard' of the Hospital. An amusing account of this fracas, which occurred in 1291, is given by Lambarde.[4]

The Hospital seems to have suffered during Simon de Montfort's attack upon Rochester in 1264 as this was advanced, in 1277, as an excuse[5] when a complaint was lodged against the Master and Brethren of failure to repair their portion of Rochester Bridge. Damage was said to have been done to houses owned by the Hospital near the west end of the Bridge, and to the Chapel.

During the fourteenth and fifteenth centuries there seem increasingly to have been abuses in the administration. In 1320 Bishop Hamo de Hethe visited the Hospital and subsequently in 1330 issued stringent new rules to remedy the many defects that he found.[6] He ordained that henceforth the Master was to be appointed by the Bishop and was to profess the rule of St. Benedict, as were the Brethren, whose number was now reduced to four. In spite of this attempt at reform, the condition of affairs in 1402 was such that the administration was taken over by the Bishop who placed his own Registrar in charge[7] and the same thing happened in 1443.[8] Finally on 26th June, 1540, on

[1] *Registrum Roffense*, 631. The surviving documents are summarized in *V.C.H. Kent*, Vol. ii, 228, and most are transcribed in full in *Registrum Roffense*, 631–52. All references to them are as given there.

[2] There were also some temporal endowments, e.g. 1/6 of Knight's fee in Aylesford (*Arch. Cant.*, lxxx (1965), 3, note 7).

[3] Smetham, Henry, *History of Strood* (1899), 130. Bishop Gilbert seems to have been an anti-Benedictine, like his contemporary Archbishop Baldwin.

[4] Lambarde, *Perambulation* (1576), 290–2.

[5] Inq. p.m. 5 Edw. 1. No. 31.

[6] *Registrum Roffense*, 637. These reforms must, in effect, have reduced the Hospital to the position of a cell of the Benedictine Priory of Rochester.

[7] *Roch. Epis. Reg.*, Vol. 2, fol. 176 d.

[8] *Ibid.*, vol. 3, fol. 187 d.

the orders of Henry VIII, the last Master, John Wyldbore, surrendered the Hospital and all its possessions to the Priory of Rochester and, in 1541, these became part of the endowments of the newly appointed Dean and Chapter. At that time its annual income is given as £52 19*s*. 10½*d*.[9]

The Excavation

Stratification. Fig. 1 shows a section across the east end of the Chapel parallel to the east wall and 4 ft. 6 in. from it. The lowest level reached at about 5 ft. 6 in. below the present surface was a layer of sandy yellow gravel of alluvial origin and was almost completely waterlogged (16). A piece of a mortarium of third- or fourth-century date was recovered from this. Above it was a layer (15) of clayey earth containing much occupation material. This layer varied in colour from grey to black and in depth from a mere 6 in. at the east end to more than 2 ft. further west. The pottery from this included fragments of flanged bowls and is also suggestive of a third- or fourth-century date. Layer 15 is interpreted as being domestic refuse derived from buildings along the line of Watling Street some 75 ft. further south.

The walls of the Hospital had cut through layer 15 and into layer 16 to a considerable depth (beneath the floor of a cellar we found them 9 ft. below the modern surface and still above foundation level), which suggests that the water-table must have been considerably lower in the thirteenth century. The building débris and earliest floor of the Hospital Chapel (layers 14 and 13) lay directly on top of the Romano-British occupation material, so evidently the surface had been levelled and any later material removed prior to the building of the Hospital. In this earliest medieval layer were several complete roofing-slates (Plate IV, B), measuring 6 in. by 10½ in., and with a single peg-hole.

On top of the chalk-floor (13) was a mass of débris (11) containing many architectural fragments as well as pieces of plaster, slate and both floor- and roofing-tiles. A knife-blade and a bronze buckle (Fig. 6 A and B), were also found. To this a further layer (10) of similar rubble mixed with lumps of chalk had been added and then several inches of brown mortar (8) which formed the bedding for a tiled floor. A few of these tiles were found *in situ* at the west end of the chapel but most of the sound ones had been removed at the time of the final destruction of the building. The débris (7) of the second demolition which contained a sixteenth-century Nüremberg jetton of Hans Schultes[10] was covered by a mass of grey clay containing roofing-tiles and clay pipes of *c.* 1640.[11]

[9] Valor Eccl. 1. 1535, *Hasted*, iii, 536.
[10] I am indebted to Mr. H. Brand for this identification.
[11] Oswald type 4.

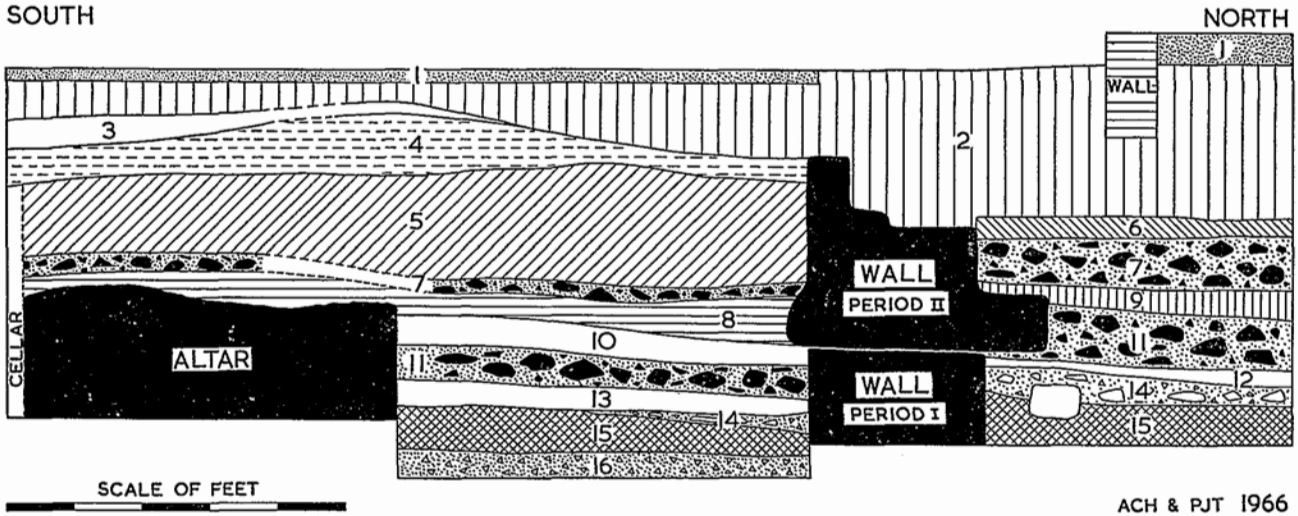

FIG. 1. Section, across Part of East End of Chapel. **1.** Modern concrete Floors. **2.** Accumulation of modern Material. **3.** Chalk Floor. **4.** Domestic Refuse. **5.** Grey Clay containing Tiles and seventeenth-century Tobacco Pipes. **6.** Yard Floor, composed of Clay and domestic Refuse. **7.** Demolition Débris. **8.** Brown Mortar. **9.** Clay and Chalk. **10.** Chalk Floor. **11.** Demolition Débris from Period I Building. **12.** Soil with Tiles and Chalk. **13.** Chalk Floor. **14.** Débris from Construction of Period I Walls. **15.** Clay. **16.** Waterlogged sandy Gravel containing Roman Pottery.

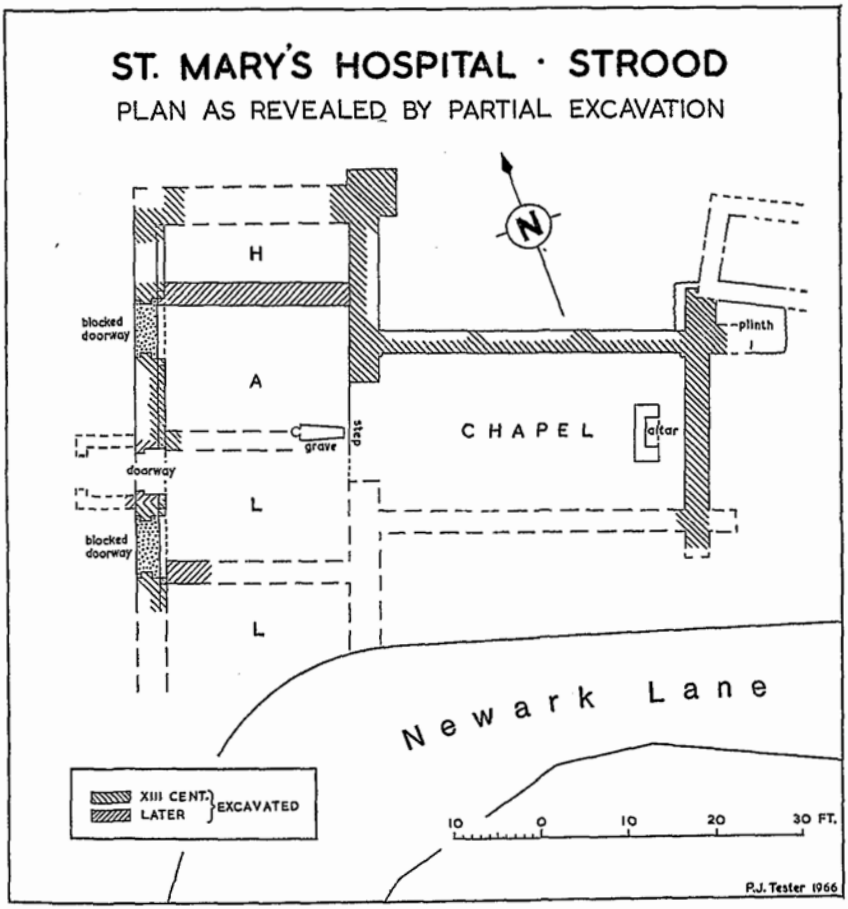

FIG. 2.

This may well represent the up-cast from digging the cellars and foundation-trenches of the houses fronting on Newark Lane. Finally there was a layer of domestic rubbish that produced fragments of Bellarmine stone-ware and Delft pottery, pipes of *c.* 1700[12] and a worn farthing of Charles II.

THE BUILDINGS

These, as was normal, consisted of a Chapel and a Hall designed so that the inmates of the latter could see the chaplain officiating at the services. Three, or possibly only two, periods of building or development can be traced.

[12] Oswald type 6.

Phase 1. The original design is as shown in Fig. 2.

(*a*) *The Chapel* measured internally 35 ft. by 18 ft. and its north wall was found to be intact to a height of 1 ft. from the original floor level, as was the west wall as far as the archway giving access to the Hall, and some 14 ft. of the east wall. The south wall had been destroyed to a low level by the cellars of the later houses but we were fortunate in being able to trace the rest of the east wall and locate its south-east corner under a cellar floor. This made it possible to complete the plan on the south side with a high degree of probability. The walls, which were 2 ft. 8 in. thick and had clasping buttresses at the corners, were constructed of roughly squared ragstone with some flint and chalk and had been plastered. The quoins, however, were of finely worked 'firestone' ashlar.[13] In the north-east and north-west corners the bases of shafts (Plate I, A) were found *in situ*, which clearly indicated that the roof had been vaulted. The floor was represented by a layer of rammed chalk and, though no tiles were found in position, fragments in the débris above the chalk suggest that there was a plain tiled floor. At various times numerous skeletons have been found under Newark Lane and to the south of it, thirty-one when the storm-water drain was constructed and 'a series' when a cellar was excavated from the 'Fountain' public house.[14] It seems clear, therefore, that the graveyard of the Hospital was in its usual position on the south side of the Chapel.

The Altar, which measured 6 ft. 4 in. by 2 ft. 10 in., and survived to a height of 2 ft. 1 in. (Plate I, B), was placed centrally at a distance of 3 ft. 2 in. from the east wall of the Chapel. Its south end had been damaged by a cellar wall. It was constructed of rubble masonry with ashlar corners and was plastered on the outside. At the rear was a rectangular space, 3 ft. by 1 ft. 10 in., the purpose of which was not established. It may have been merely a constructional device to save material or it may have been a cupboard to hold sacred vessels or even relics. For what it is worth, two fragments of human bone were found in this recess.

(*b*) *The Hall.* This was a comparatively narrow building with its long axis at right angles to the Chapel. It was 22 ft. 8 in. wide and at least 45 ft. long. If symmetrical, the length would have been 52 ft., but the roadway prevented us from tracing it any further to the south; it may possibly have extended as far as the High Street. The east wall was pierced by the archway which led into the Chapel and was 11 ft. wide. There seems to have been a step at this point as a masonry

[13] The term 'firestone' is here used for the sandstone obtained from the Upper Greensand, also known as Gatton, Merstham and Reigate Stone. Canon Livett in *Arch. Cant.*, xxi (1895), 40, considers this stone as typical of late twelfth-century or thirteenth-century work.

[14] Smetham, *op. cit.*, 135.

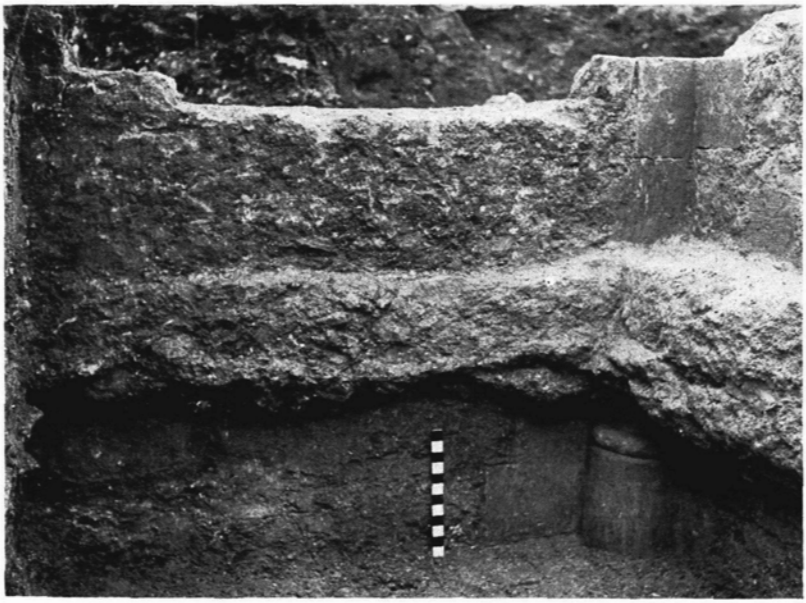

Photo: R G. Foord

A. North-east Corner of Chapel, showing Vaulting Shaft.

Photo: R. G. Foord

B. The Altar.

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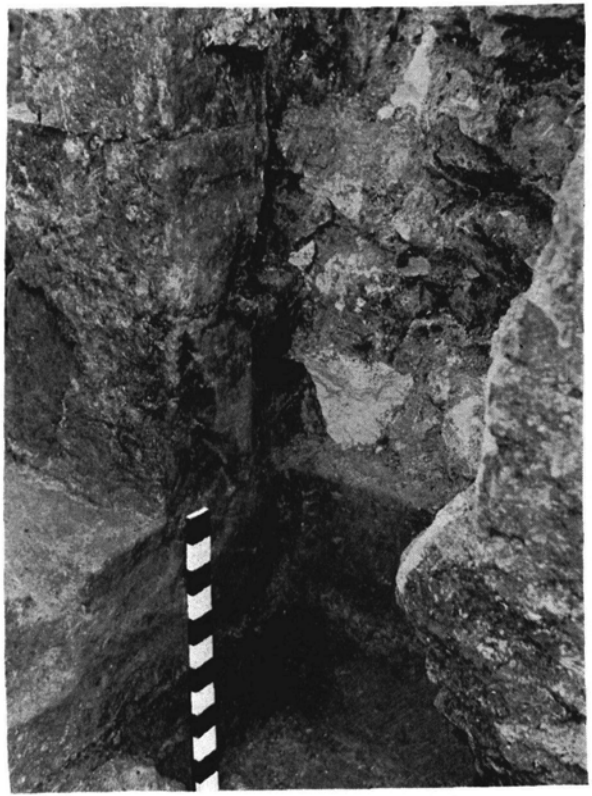

Photo: R. G. Foord

A. Original Doorway of Hall.

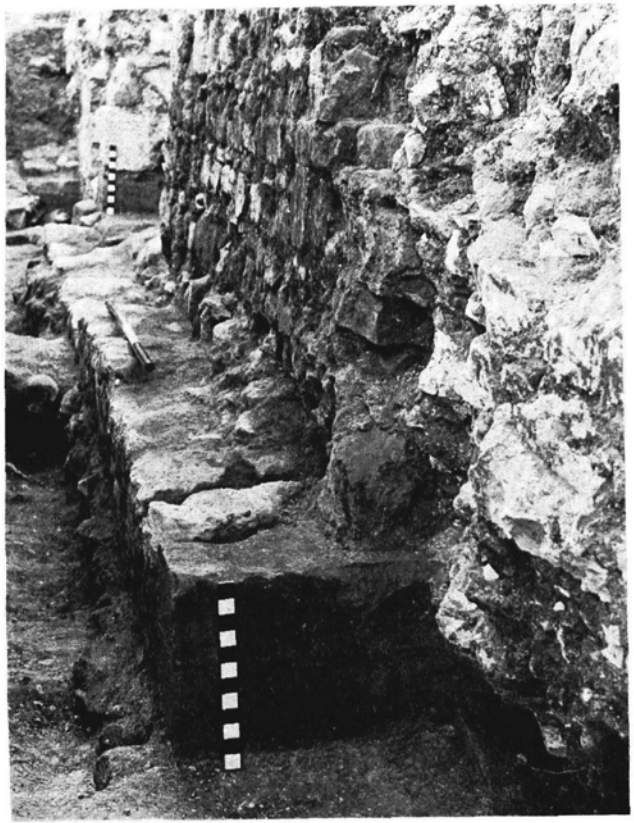

Photo: R. G. Foord

B. West Wall of Hall.

Photo: R. G. Foord

A. East Wall of Hall, with inserted Partition.

Photo: R. G. Foord

B. Later Entrance to Hall.

PLATE IV

Photo: R. G. Foord

A. The Grave.

Photo: P. J. Tester

B. Medieval Roof Slates.

Photo: P. J. Tester

A. Architectural Fragments.

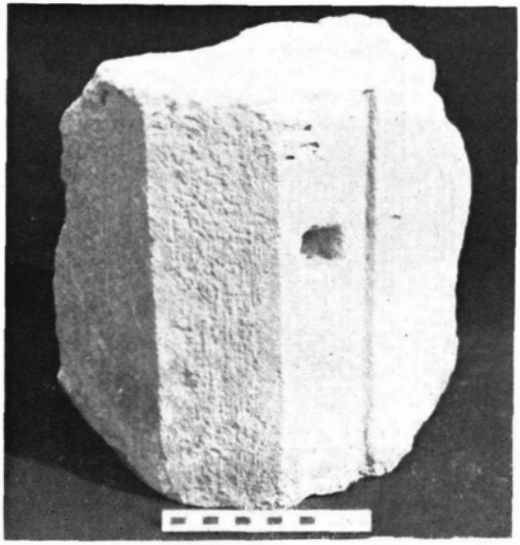

Photo: P. J. Tester

B. Window Jamb.

Photo: P. J. Tester

A. Capitals.

Photo: P. J. Tester

B. Bases.

foundation ran across the opening. In the west wall were two entrances each 7 ft. 2 in. wide. These had been constructed of firestone ashlar and in the better preserved southern entrance the hinge-pins survived on both sides (Plate II, A), clearly indicating double-doors. These pins had been set 2 ft. from floor level and recessed 4 in. into the door-rebate. There was a 2-in. chamfer on the outside edges of the doorways and a 2-in. bevel on the first projecting course of masonry. Along the inside of the west wall was the footing, just under 1 ft. wide, of a stone bench. This was interrupted by the doorways on each side of which the bench terminated in a carefully squared ashlar block. Immediately above this bench the wall surface was ragged indicating that the slabs that formed the actual seat had been robbed (Plate II, B).

At a point roughly opposite—the apparent asymmetry may be due to the fact that the arch was rebuilt in Phase II—the centre of the Chapel archway the Hall was divided by a cross-wall. The wall, which was 2 ft. 3 in. wide and plastered on both sides, was only traced for about 3 ft., but must originally have extended as far as the entrance to the Chapel.

The walls of the Hall were of varying widths; the north being the widest at 3 ft. 6 in., the east 3 ft. and the west 2 ft. 6 in. At the north-east corner there was quite a wide plinth clasping the corner and making a foundation 5 ft. 7 in. square. If this were for a newel stairway, as seems possible, it suggests an upper storey over at least part of the Hall.

Phase II. There was clear evidence that the original Chapel was destroyed almost to ground level and rebuilt on the same ground plan. Foundation material approximately 1 ft. thick was laid on top of the stumps of the old walls and the new walls, 2 ft. 6 in. in width, built upon this, although the alignment was not exact and in places the earlier wall projected below the line of the later. The later wall was of a different character from the earlier, being mostly of ragstone with courses of roofing-tile, and the mortar was paler with much lime. It also incorporated dressed and carved stone from the earlier building. At the same time a new floor of plain tiles was laid on top of about 1 ft. 6 in. of rubble containing numerous architectural fragments (Plates V, A and VI). The collapse of the Chapel also involved the east wall of the Hall which was rebuilt at the same time. The wide plinth of ragstone rubble added to the north-east corner of the Chapel probably belongs to this period.

Phase III. In its final phase the Hall would seem to have been converted into an ante-Chapel. It was shortened by the insertion of walls which cut off both ends, reducing its length to 29 ft. Plate III, A, shows the vertical joint of this insertion. At the same time the original two entrances were blocked with a mass of rubble, mostly chalk, set in

a red-brown mortar, the central dividing wall was demolished and a new entrance made, of which the southern jamb and part of the threshold survived (Plate III, B). This doorway was 5 ft. 4 in. in width and the surviving jamb had a stopped chamfer on the outside. The bench along the west wall was partially demolished and the floor of the Hall raised by a build-up of rubble and brown mortar 1 ft. 4 in. in height to the same level as that of the threshold of the new doorway. No tiles belonging to this floor were found *in situ*, but numerous fragments showed that these must have been similar to those forming the first floor of the Chapel. On the outside of the entrance the foundations of a wall 15 in. wide butted up against the west wall of the Hall to the south. This may well indicate a porch, but this could not be definitely established as the north side of the doorway had been destroyed by an eighteenth-century pit, and further investigation to the west was impossible because of a telephone cable.

The Grave. (Plate IV, A.) Into the floor of the Hall at the centre of the archway leading into the Chapel a very well-made grave had been sunk. It was constructed of yellow bricks, measuring 8½ in. by 4 in. by 2 in., backed by rubble, and the floor consisted of three rows of eight glazed tiles, 7½ in. sq. The rounded head of the grave was made of re-used pieces of firestone ashlar, one of which had formed part of a moulding. The foot of the grave had been destroyed, presumably when the slabs of the step leading into the Chapel were robbed, and the grave-slab was missing. The grave contained parts of two skeletons. One, the primary interment, was intact except for the small bones of the feet and hands (see Appendix II), but the bones of the other were much disturbed and may even have come from another grave, perhaps when a lead coffin was emptied. A copper buckle (Fig. 6 C) was the only object found in the filling of the grave.

The small rectangular building at the north-east corner of the Chapel was probably domestic in purpose and post-Dissolution in date. Its walls, which were 2 ft. 3 in. in width and plastered on both sides, were constructed almost entirely of re-used stone.

Discussion

There seems little doubt that the Phase I building represents the original Chapel and Hall of Bishop Gilbert's foundation and the surviving architectural fragments are quite consistent with an early thirteenth-century date. In design the building, though much smaller, has a close similarity to Lanfranc's Hospital of St. John at Canterbury,[15] and Fig. 3 shows the ground plans of the two buildings compared. Both had a narrow aisle-less Hall at right angles to the Chapel and there

[15] *Arch. Journ.*, lxxxvi (1930), 101–2.

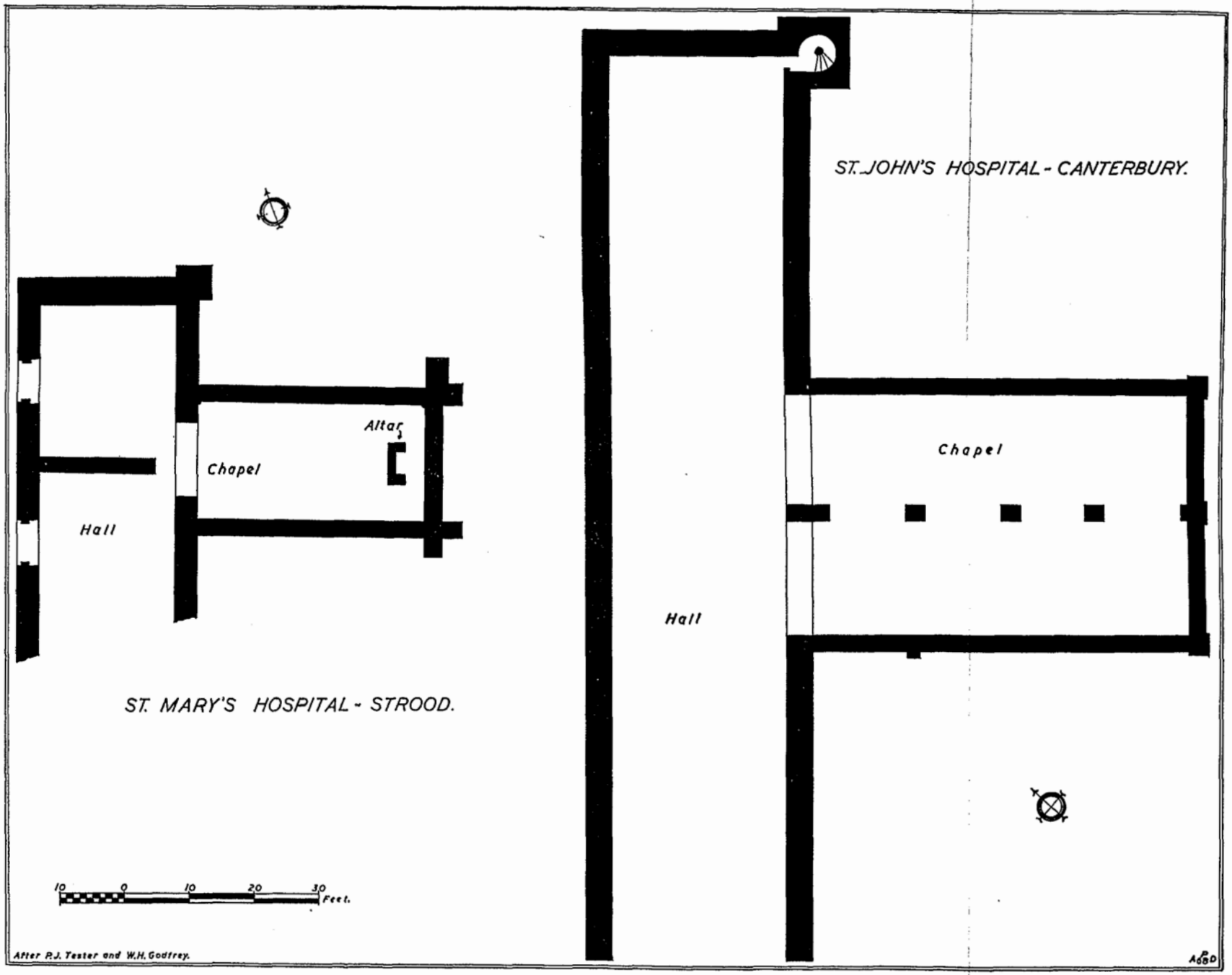

FIG. 3.

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seems little doubt that the dividing wall at Strood was also intended to ensure a proper separation of the male and female inmates while allowing an uninterrupted view into the Chapel. There is no evidence, however, that at Strood the Chapel itself was divided. It is perhaps worth noting that Lanfranc's building had a stairway at the north-east corner of the Hall and this could well have been the case at Strood, implying a second storey over part, or all, of the building. It seems quite probable that in both buildings the Hall range may have been continued and at Strood there is some evidence that it extended as far as the High Street. In a will dated 1444[16] there is a reference to a cross that stood at 'a road junction which was next to the gate of the New Work in Strood' and which must clearly be the junction of High Street and North Street (see Fig. 4).

It is tempting to equate the destruction of the Chapel at the beginning of Phase II with the damage known to have been done to it by Simon de Montfort in 1264. Several considerations, however, make this improbable. Firstly, there was no sign of burning, which one would have expected from war damage; secondly, at the north-west corner, the Chapel wall was cracked right through, which is more suggestive of structural collapse; and, thirdly, the character of the Phase II wall seems later than the thirteenth century. Two pieces of cut ragstone were found built into later walls and one of these, which is clearly part of a window with a hole for an iron cross-bar and a slot for the glazing (Plate V, B), can hardly be earlier than the late fourteenth century. It is not, of course, certain that these belonged to the Phase II Chapel, but it seems highly probable. On the whole, therefore, it seems most likely that it was the thrust of the vaulted roof which overthrew the walls combined, perhaps, with the instability of the water-logged subsoil. At all events when the rebuilding took place—possibly in the late fourteenth or fifteenth century—the vaulted roof was not replaced and the north-east corner reinforced with a massive buttress.

Phase III. How soon the rebuilding of the Chapel was followed by the alterations to the Hall in Phase III cannot be definitely established, but it would seem probable that the interval was short, or it may even have been a single operation. Both the jambs of the new entrance and the head of the grave were made of re-used firestone, which almost certainly had been salvaged from the collapse of the Chapel and which would not have remained available indefinitely. These alterations, and particularly the construction of the grave in what had been living-quarters, indicate that the Hall had by now ceased to perform its original function and had become an ante-Chapel. It is not quite clear

[16] *Testamenta Cantiana*, West Kent, 75.

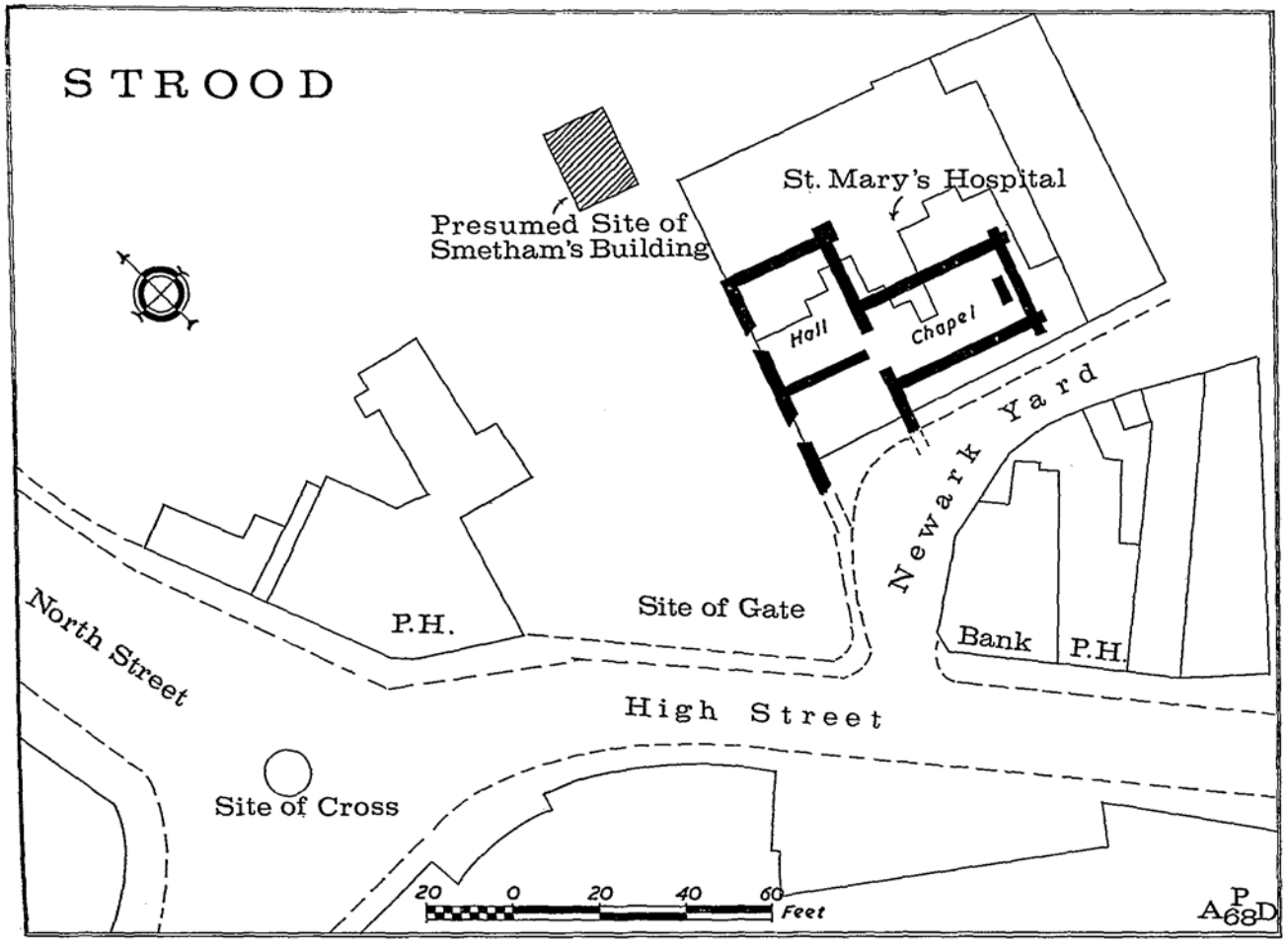

STROOD
Presumed Site of
Smetham's Building
St. Mary's Hospital
Hall
Chapel
Newark Yard
P.H.
Site of Gate
North Street
Bank
P.H.
High Street
Site of Cross
20 0 20 40 60
Feet
P
A68D

FIG. 4.

whether the inserted walls were partitions, in which case it is difficult to decide what was the function of the very narrow room at the north end, or whether they now formed the outside walls which would suggest a very extensive remodelling of the whole building. On balance, perhaps the former theory seems the more probable.

The presence of the grave is interesting. Both its central position and its elaborate construction indicate that it was for someone of importance; it seems possible that this may have been the person responsible for the remodelling of the building and that on his death he was thus honoured as a second Founder. A close parallel is afforded by the two brick tombs associated with the last phase of the Hospital of New Romney, one of which Mr. S. E. Rigold, F.S.A., assigns to the John Frauncey who re-founded the hospital in 1363.[17] In this connection it is perhaps permissible to offer a suggestion as to the identity of the second Founder of Strood. In 1361 William of Basing was appointed Master and, from 1367 until his death in 1383, he was constantly employed as clerk of works for the royal castles and manors in Kent. Such a man was clearly in a position to plan and execute such an extensive reconstruction and would have had skilled masons at his command.[18] Further, the brickwork of the tomb and the stone work of Phase II of the Chapel are quite consistent with a late fourteenth-century date. The known facts of the career of William of Basing and of his successor, Thomas Bromelegh, who is also a possible candidate for similar reasons, are given in Appendix I.

It remains to consider the rest of the buildings not covered by the excavation and there is evidence that part of these may have survived the Dissolution. In Fisher's *History of Rochester*, published in 1772,[19] there is the following reference to the site: 'Behind the houses that now occupy this spot are two arches of Caen stone, one of which appears to have led from the Hospital to the Chapel. Some thick walls of that part of the building . . . are still remaining. There is also a low arched doorway which leads from the Hospital to the orchard behind it.' Further, in Smetham's *History of Strood*,[20] published in 1899, the author states that 'some 25 years ago . . . removed the last surviving portion of this old Hospital' and refers to a sketch, now in Rochester Museum, which shows the interior of a timbered building with tie-beam and crown-post. This crown-post, which is also preserved in Rochester Museum, is shown in Fig. 5. With regard to the first reference, neither of the arches mentioned by Fisher can have been that between

[17] S. E. Rigold, M.A., F.S.A., 'Two Kentish Hospitals re-examined', in *Arch. Cant.*, lxxix (1964), 57; also *Arch. Cant.*, lxxx (1965), 29.
[18] I owe this reference to Mr. S. E. Rigold, F.S.A.
[19] Fisher, *History and Antiquities of Rochester*, 1772, 245.
[20] Smetham, *op. cit.*, 134.

the Hall and the Chapel as the remains of this were securely sealed beneath a chalk floor of *c.* 1700. They could possibly have been the entrances through the west wall of the Hall, though these were of firestone, not Caen stone, or they may have belonged to some other building altogether.

As for the timbered Hall shown in the sketch, a careful comparison of the Ordnance Survey map of 1864 with that of 1897 shows only one major building in the area which has disappeared during the period, i.e. the rectangular structure shown as lying to the north-west of the original Hall range (Fig. 4), and it would seem probable that this is to

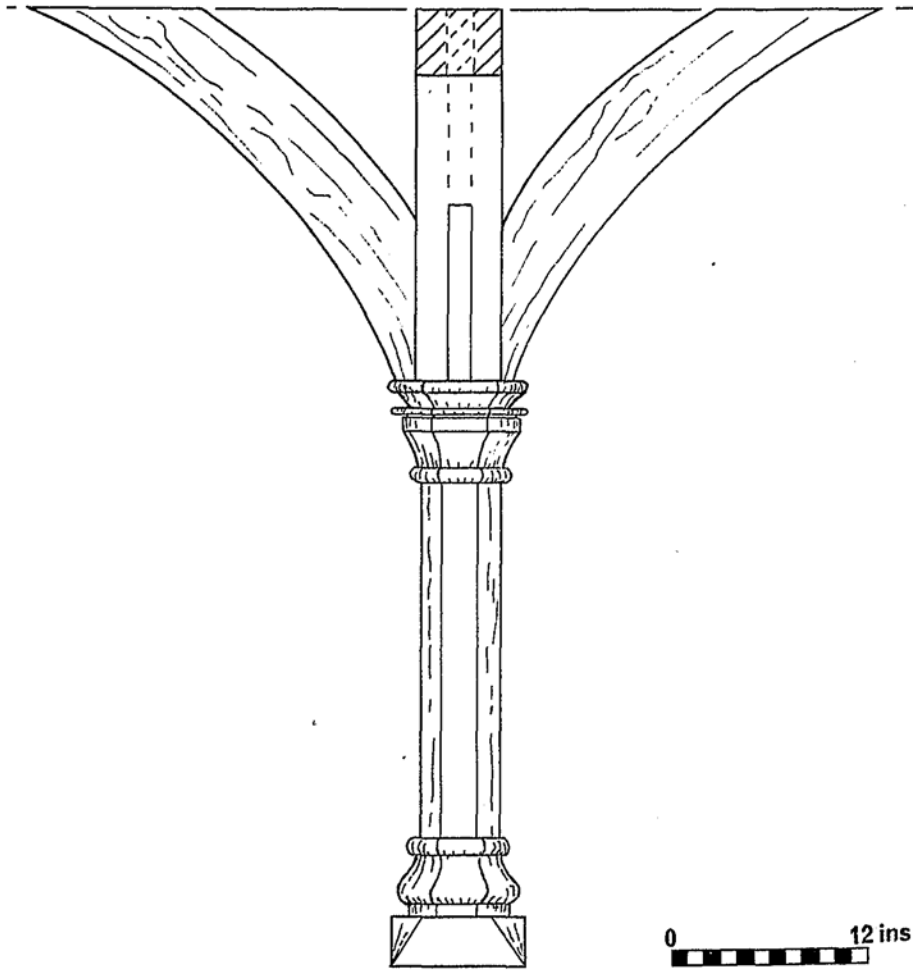


FIG. 5. Crown-Post in Rochester Museum. (*Drawn by E. R. Swain.*)

be identified with it. Now it is clear that the re-foundation of the Hospital and the conversion of the original Hall into an ante-Chapel did not mean that the Hospital ceased to function as a charitable institution; indeed, as late as 1528, a bequest was made to the Master 'to bye matteras, schets, and coverletts for his almes house for poor people'.[21] Some other building must therefore have been provided for this purpose and this may reasonably be identified with the 'last surviving portion' mentioned by Smetham, particularly as the crown-post could well be of late fourteenth-century date. It seems not improbable, therefore, that in its final phase the Hospital formed a quadrangle (see Fig. 4), bounded on the east by the original Hall and Chapel and on the north by the new 'almes house' with a gate opening on to the High Street.

THE FINDS

1. Building Materials

Stone

The freestone employed in the building was mainly Reigate stone ('firestone') from the Upper Greensand, and ragstone, no doubt quarried in the Maidstone area. There were a few fragments of Bethersden marble, probably from a grave-slab. Flints also formed a constituent of the rubble foundations and walls.

Plaster

Quantities of this were found in the earlier demolition layer (Period I). The surface was lime-washed white or pink, but there was no sign of wall-paintings.

Floor-Tiles

Examples from the Chapel (Period II) averaged $5\frac{1}{4}$ in. $\times 5\frac{1}{4}$ in. $\times 1$ in. with bevelled edges so that the underside was $4\frac{3}{4}$ in. square. The material was red clay with white slip and having green to brown glaze, much eroded. Some were scored diagonally as though with the intention of facilitating breakage.

Tiles from the floor of the grave (Period II) measured about $7\frac{1}{2}$ in. $\times 7\frac{1}{4}$ in. $\times 1$ in., of red clay covered on the upper face with green, yellow or brown glaze. Two had perforations at the centre to allow drainage of putrification liquids from the corpse.

None of the floor-tiles recovered in the excavation bore inlaid or stamped decoration.

[21] *Testamenta Cantiana*, West Kent, 77.

Roof-Tiles

Plain tiles of common type occurred in Periods I and II. The width was 6½ in. and they had two peg-holes. A few unstratified examples were 7½ in. wide and at least 9½ in. long.

Slates

(Plate IV, B.) Examples of unused roof-slates found sealed under material of Period I floor in Chapel. Grey slate which the Institute of Geological Sciences considers may have had an origin in Devon or Cornwall. Medieval use of West Country slates in south-east England is well attested (see *Sx. A.C.*, Vol. 103, and *Arch. Cant.*, lxxxii (1967), 152). The Strood specimens had a single nail-hole and measured 5½–6 in. in width and 10½ in. in length. One had been cut to 6½ in. long.

Bricks

From the grave: sizes approximately 8½ in. × 4½ in. × 1¾ in. Colour ranged from pink to yellow, and some had been vitrified in firing.

Notes on Fragments of Carved Stone and Mouldings

By P. J. Tester, F.S.A.

1. (Plate VI, A, *left.*) Echinus of Early English capital with stiff-leaf carving, height 9 in. The diameter of the shaft to which it was attached was about 3½ in. Dowel-holes occur in both lower and upper ends, the former being for the attachment of the separate moulded abacus, of which no trace survives. The lower dowel secured the capital to the top of the circular-sectioned shaft. One side of the capital is less carefully finished than the other, indicating that it was attached to a shaft that was not free-standing. Its possible uses are, therefore:

(*a*) At the head of a vaulting-shaft, the abacus supporting the springers of the vaulting ribs.

(*b*) On one of the shafts of a wall-arcade forming mural seats, as in the Early English churches at Alkham, Cheriton, and Stone, near Dartford.

(*c*) On a shaft set in the jamb of a window or doorway.

As regards date, the stiff foliage, based possibly on the clover-leaf, seems to have come in during the last quarter of the twelfth century and continued to at least the middle of the thirteenth, when it occurs in Henry III's work in Westminster Abbey, and also at Stone, near Dartford. The Stone foliage appears to be a little more developed than the Strood carving which I would place nearer the beginning of the thirteenth century. From the Period I destruction. Material is firestone.

2. (Plate VI, A, *right.*) A similar fragment to the last, height 7 in.

It is not decorated on one side, showing that it was set against a wall. In the top is a dowel-hole for securing the abacus, and another occurs in the lower end. Here the indications are that the shaft was very slender, and seemingly not more than 2½ in. in diameter.

The carving of the foliage is less graceful than in No. 1, and stylistically it looks back to the Corinthianesque capitals popular in the late twelfth century, as exemplified in William of Sens' work at Canterbury soon after 1175, rather than forward to the more flowing treatment of the developed Early English style. There is no good reason, however, for believing it to be otherwise than contemporary with No. 1. The material is firestone, and it occurred in destruction débris from Period I.

3. (Plate VI, B, *left.*) Circular base, diameter 8½ in. It has the hollow between the upper and lower rounds found in Early English work of the first half of the thirteenth century. Francis Bond[22] observed that this 'water-holding' base originated as early as *c.* 1150 and was still not wholly discarded by 1260. Period I.

4. (Plate VI, B, *right.*) Circular base discovered *in situ* built into the internal north-east angle of the Chapel at floor level and obviously forming the base of a vaulting-shaft. Radius of the plinth is 4¾ in. and the diameter of the seating for the shaft, which rose from inside the upper round, was 4 in. The profile does not show the 'water-holding' recess, but is clearly derived from the Classical Attic base, consisting of two rounds separated by a hollow. This served as a model to twelfth- and thirteenth-century masons,[23] and appears in a form almost identical with that at Strood in the late-twelfth-century work in Canterbury Cathedral quire. Firestone. Period I.

5. (Plate V, A, *left.*) Section of moulding consisting of two rounds separated by a deep hollow occupied by the curiously-styled 'dog-tooth' ornament. This was common from the late twelfth century to at least the middle of the thirteenth. This piece of moulding had been re-used as wall material in Period II, but was undoubtedly derived from the Period I chapel. Material is firestone.

6. (Plate V, A, *right.*) Early English moulding with pointed bowtel, similar to an example from Haseley, Oxfordshire, figured by Parker[24] and dated *c.* 1220. There the suite includes dog-tooth ornament.

A fragment of another similar moulding shows a pointed bowtel between hollows. Both are of firestone.

7. (Plate V, B.) Part of ragstone window-jamb, external face, cham-

[22] Bond, Francis, *Gothic Architecture in England* (1906), 449.
[23] Braun, Hugh, *An Introduction to English Medieval Architecture* (1951), 270–1.
[24] Parker, John H., *An Introduction to the Study of Gothic Architecture* (1888), 114.

fered and with glazing-groove. Hole for insertion of bar of iron grille. Found in post-medieval reconstruction at east end of Chapel and thought to have come from Period II work.

Also from the Period I destruction layer, a block of chalk, roughly shaped to a truncated pyramid-form with a hole, about $\frac{5}{8}$ in. in diameter, and $1\frac{1}{2}$ in. deep, at the apex. The base measures roughly $4\frac{3}{4}$ in. $\times 4\frac{1}{4}$ in. Of unknown use, but it is suggested that it might have been a crude taper-holder, such as could have served the needs of a workman employed on the building.

2. Metal Objects

The bronze strap-end buckle and belt ornament shown in Fig. 6, A and B, were found in the demolition débris of the first Chapel. Both are decorated with rouletting, and the buckle was originally gilded; it is very similar to the one shown as Plate LXXV, 6, in the London Museum *Medieval Catalogue*, London, 1954.

The plain copper belt-buckle shown in Fig. 6, C, is from the grave described above (Plate IV A) and was almost certainly associated with skeleton no. 2.

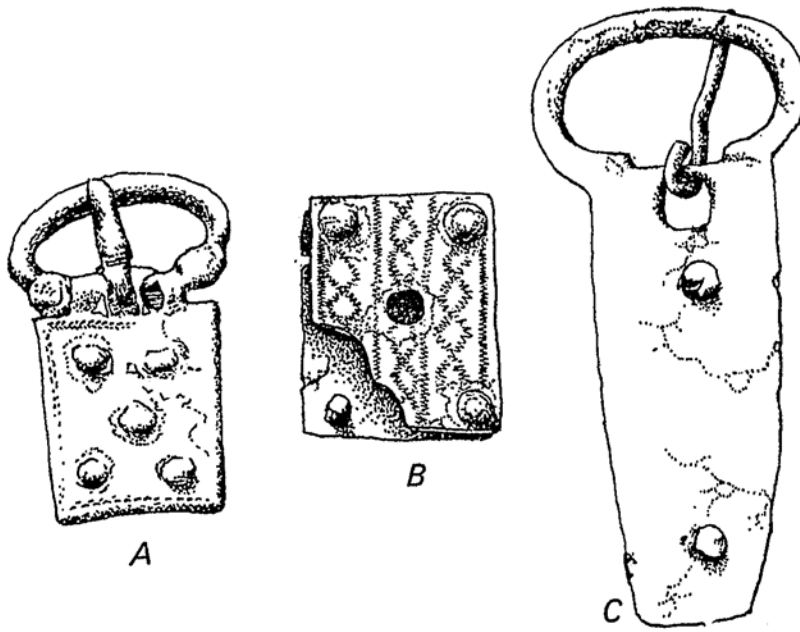


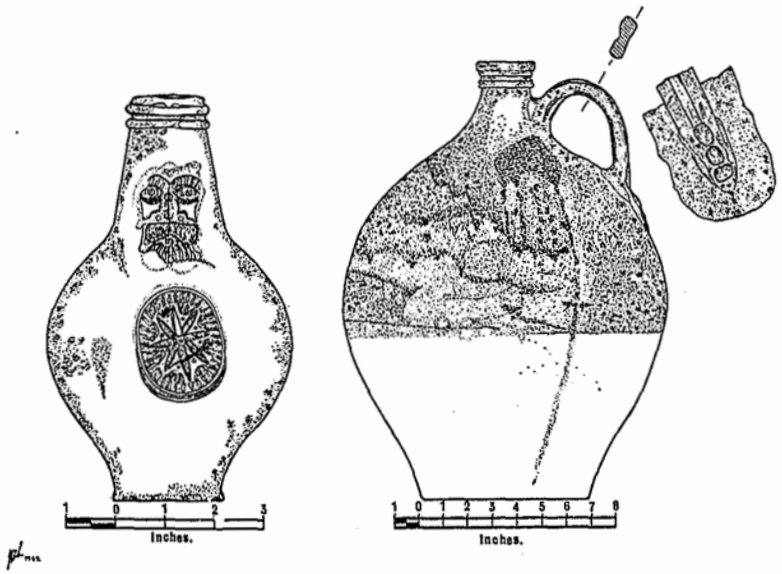
Fig. 6 ($\frac{1}{1}$). Bronze Belt Fittings. (*Drawn by G. G. E. Shaw.*)

3. Salt-Glazed Pottery

By J. E. L. Caiger

Fig. 7, A

Salt-glazed stoneware Bellarmine jug. 8¼ in. high. The mask broadly conforms to Holmes's type VIII, with typical hour-glass-shaped mouth. The coarsely moulded mask displays a most disagreeable expression, the teeth being represented by stylized lines. The waist of the jug bears a roughly applied oval medallion, 2¼ in. high. It is late in form and consists of eight sprigs arranged in a petaloid. This medallion is fairly common and together with its outer banding could be taken to represent the Star and Garter motif. The base of the footring bears the customary series of concentric circles indicating the method of parting the vessel from the wheel. From its general characteristics, it appears to be of Rhenish origin, probably manufactured at Frechen, in the mid-seventeenth century. The body of the jug is of an even drab brown colour with only a slightly mottled appearance. The handle is missing but its lower terminal remains showing the usual *lizard's tail* finish to the body. When found, the neck of the jug was sealed with



A. B.

Fig. 7. Salt-glazed Stoneware. (*Drawn by J. E. L. Caiger.*)

a cork, and judging by its contents had undoubtedly been used as a witch-bottle.[25] Although the contents had become little more than a small pile of rust, several iron pin heads, pieces of iron scale, one bent rusted nail and a tiny fragment of cloth could be identified amongst the residue. Several similarly prepared Bellarmine jugs have been found in Kent in recent years.

Fig. 7, B

Large salt-glazed stoneware jug, 17¾ in. × 13 in. diameter, capable of holding approximately four gallons of wine or other fluids. The body of the jug is bulbous and bears a short neck reinforced with cordons. The top half of the jug is of a mottled brown colour produced by dipping the upper part of the vessel into an iron salt wash or slip before firing. The lower part is of a natural buff colour and the demarcation line between oxide stain and the undipped portion is sharply defined. The sturdy strap-handle bears three decorative finger indentations where it joins the body of the jug and has the characteristic twist in it so often to be noted on these jugs. Its general appearance suggests it may have been made at Fulham in the early eighteenth century.

Appendix I

William of Basing and Thomas Bromelegh

In view of the fact that William of Basing and his successor were clearly men of some importance in their day and of the strong possibility that one or the other may have been, as suggested above, the second Founder of the Hospital, it seems worth while to place the known facts of their careers upon record.

William of Basing was appointed Master of the Hospital in 1361,[26] and in May 1367, became controller and surveyor, with one Gilbert Golding, of the works of Rochester Castle under Prior John of Hartlip,[27] an appointment which was renewed the following year.[28] In 1373 it was evidently decided to group the Kentish castles and royal manors together administratively, and in April of that year he was appointed, at the wage of 12d. a day, 'chief master and clerk of the works' at the castles of Leeds and Rochester and the manor of Gravesend,[29] a rather grandiose title which may have reflected his personal status. He remained in charge of this group until at least the end of Edward III's

[25] E. W. Tilley, *Arch. Cant.*, lxxx (1965), 252.
[26] *Cant. Archiepis. Reg. Islip*, fol. 225.
[27] *Cal. Pat. Rolls, 1364–67*, p. 398; *Arch. Cant.*, ii (1859), 111.
[28] *Cal. Pat. Rolls, 1367–70*, p. 8.
[29] *Cal. Pat. Rolls, 1370–74*, pp. 286–7.

reign, Queenborough being added in June 1373[30] and various manors belonging to the king in November 1375.[31] It may be noted, however, that in August 1373[32] he was relieved of the duty of making payments at Queenborough 'in view of the too onerous duties thus required of him', though he is still named as clerk of works there in April 1374.[33] His accounts of expenditure between April 1373 and June 1377[34] survive and seem to indicate that no work was undertaken in Rochester before 1375 but that his final account was entirely concerned with that castle. It was probably in view of the increasing importance of this work that in May 1378[35] he was appointed 'chief surveyor and clerk of works at the king's castle of Rochester', an appointment renewed in March 1379[36] and again in February 1380,[37] when Leeds Castle and its park were added to his responsibilities. His account for August 1380, shows an expenditure of £80 at Rochester and Leeds.[38] In the following year his energies seem to have been turned in a new direction. The condition of Rochester Bridge, always precarious, had become desperate, and in May 1381,[39] he was authorized for a period of five years to apply the profits of a fair at Rochester and Strood to 'rebuilding and repairing the bridge between those places lately destroyed by inundations of the Medeweye', and in the following year a commission of enquiry into the responsibility for its repair was appointed as 'it was in such ruin as to be impassable'.[40] In February 1383,[41] William Basing was appointed to apply the profits of the ferry over the Medway to the repair of the bridge, under the supervision of John de Cobham (who had been a member of the commission mentioned above), John Philpot and John Newington, Knights, and of Henry Yevele, stonemason, 'the said William . . . having been appointed with power to distrain all persons who have timber'. By the next month, however, it had evidently been realized that the old bridge was beyond any further patching, as on 20th March, 1383,[42] a grant of special pontage, i.e. a charge of 1d. on every horseman and ½d. on every foot passenger, except those attending the local markets, was made 'in aid of building a larger bridge between Rochester and Strood'. Had William lived, he would no doubt have continued to work with Henry Yevele on the new

[30] *Cal. Pat. Rolls, 1370–74*, p. 302.
[31] *Cal. Pat. Rolls, 1374–77*, pp. 190–1.
[32] *Cal. Pat. Rolls, 1370–74*, p. 330.
[33] *Cal. Pat. Rolls, 1370–74*, p. 429.
[34] *History of the King's Works*, ii, p. 701.
[35] *Cal. Pat. Rolls, 1377–81*, p. 213.
[36] *Cal. Pat. Rolls, 1377–81*, p. 334.
[37] *Cal. Pat. Rolls, 1377–81*, p. 540.
[38] *History of the King's Works, loc. cit.*
[39] *Cal. Pat. Rolls, 1381–85*, p. 5.
[40] *Cal. Pat. Rolls, 1381–85*, p. 136.
[41] *Cal. Pat. Rolls, 1381–85*, p. 221.
[42] *Cal. Pat. Rolls, 1381–85*, p. 243.

bridge which was built between 1387–92, but he died some time between March and August 1383 when the grant of pontage was transferred to Thomas Bromelegh,[43] who also succeeded him as Master of St. Mary's Hospital.

Bromelegh was called upon to render accounts in connection with his responsibilities for the bridge in November 1384,[44] and June 1385,[45] and in November 1387,[46] the king made a grant of lime for use on the bridge to an unnamed 'Master of the New Work at Strode' who must be identified with him. He was also, in May 1384,[47] appointed chief surveyor and clerk of works at Rochester Castle, an appointment which was renewed in May 1386,[48] when he was to execute repairs 'to resist imminent invasion'. The last reference to him as Master of the Hospital is in April 1390,[49] in connection with a debt and in the following year John Swan is referred to as Master.[50]

Appendix II

The Inhumation Burials

Skeletons 1 and 2 came from the same grave which is of fourteenth- or fifteenth-century date. No. 1 comprised the following complete bones, viz. skull (facial bones detached), both femora, tibiae, fibulae (with calcaneum and talus), and humeri, the left radius, the left ulna and some hand and foot bones. There were also two incomplete clavicles and scapulae, vertebrae, ribs, sacrum, incomplete pelvis and ossified thyroid and costal cartilage. No. 2 was complete except for some of the hand and foot bones. Both skeletons were male and of robust build. In No. 1 dental attrition was extreme and secondary dentine had formed in spite of oral pathology which included two large caries cavities resulting in abscesses, moderate calculus deposits and an infection of the right antrum. Apart from slight osteo-arthritic lipping on the lumbar and lower thoracic vertebrae there was no other pathology. The age was probably over 40. Skeleton No. 2 showed

[43] *Cal. Pat. Rolls, 1381–85*, p. 308.
[44] *Cal. Pat. Rolls, 1381–85*, p. 506.
[45] *Cal. Pat. Rolls, 1385–89*, p. 79.
[46] *Cal. Pat. Rolls, 1385–89*, p. 377.
[47] *Cal. Pat. Rolls, 1381–85*, p. 398.
[48] *Cal. Pat. Rolls, 1385–89*, p. 216.
[49] *Cal. Pat. Rolls, 1388–92*, p. 70.
[50] *Roch. Ep. Reg.*, Vol. 2, fol. 23. In the *History of the King's Works*, ii, 813, it is stated that in 1386 John Swan, Master of the Hospital of the Blessed Mary in Strood, was commissioned to 'repair Rochester Castle against imminent danger of assaults' and further that his accounts for 1384–88 show that £66 10*s*. was spent upon it. It seems likely that this is an error for Thomas Bromelegh both because he was in fact Master at that time and because of the similarity of the wording to the entry in the Patent Rolls cited above.

similar dental attrition and secondary dentine had formed. There was extensive maxillary swelling which looks like a large cystic process. In addition to this anomaly, there were impacted upper canines, large palatine taurus and tripartite inca bones. The remaining teeth are slightly irregular and show a heavy calculus deposit on their outer (buccal) surfaces. An abscess of the left antrum has opened backwards. There was a small horn-like exostosis on the left humerus about 2 in. above the elbow. The thoracic vertebrae and mandibular condyles show slight osteoarthritic changes. The age was probably over 40 but not more than 60.

Some foot bones, showing inflammatory changes of the basal joint of the first (great) toe, may belong to either skeleton.

Skeleton 3 was found in an exploratory trench to the west of the Hall. The surviving bones comprised the skull, both femora, both tibiae, one fibula, right humerus, left radius, left scapula and both inominates (incomplete). The skeleton was of a younger individual, probably in his twenties, and, though undoubtedly male, was of slight build. The teeth, in contrast to those of skeletons 1 and 2, showed comparatively little wear and the condition of the bones is consistent with a medieval date.

Tables 1 and 2 give the anthropometric measurements in millimetres.

TABLE 1

SKULL MEASUREMENTS

	1	2	3
L	193	178	177
B	149	139	147·5
B^1	—	96	96
R	132	126	137
LB	—	123	102·5
S1	127	124	125
S2	129	136	123
S3	141	111	118
$S^1 1$	109	109	110·5
$S^1 2$	117	120	108
$S^1 3$	109	94	101·5
B13	115	108	116
$G^1 H$	—	—	53
GL	—	—	98·5
G3	—	90	87
G2	45	41	39
$G^1 1$	53	45	45
J	—	125	129
$O1^1$	—	38	38
O2	—	33	34
O1	—	—	42
FL	40	36	34

[*Table 1 continued overleaf*

TABLE 1—*continued.*

FB	37	29	28
NH	54·5	45	45
NB	25	23	23
NH[1]	—	46	49
SO	9	9	9
NB4	11	12	13
DL	—	24	26
W1	—	113·5	118
GoGo	108	98·5	93
ZZ	51·5	45	42·5
RB	33	33·5	35
R[1]	31	31	30
H2H	—	28	29
CYL	—	22·5	20
HL	123	110	110
CrCr	—	80	86

TABLE 2

POST-CRANIAL MEASUREMENTS

	1	2	3
FeL1	525	450	450
FeL2	524	449	449
FeL3	503	428	427
FeD1	28	25	26
FeD2	33	32	29
TiL1	433	364·5	277
TiL3	423	361	389
TiD1	38	34	35
TiD2	29	25·5	24·5
HuL1	358	323	327
HuD1	26	22·5	24
HuD2	21	20	17·5
RaL1	265	241	244
UlL1	289	260	—
FlL1	—	—	364

Estimated Stature (using the formula given by Trotter and Glazer, *Am. J. Phys. Anthrop.*, **16** (1958), 79–123).

187·7 cm. 169·66 cm. 171 cm.