# ROCHESTER EAST GATE, 1969*

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

## Introduction

In 1969 it was learned that the area of nos. 108-122 High Street (N.G.R. TQ 744684) was to be cleared of buildings and converted into a car park. As the city wall was known to run through the site and it was thought probable that part of the East Gate itself might be found, an excavation was carried out between 11th August and 9th September by permission of the Rochester City Council, the landowners. Much help from the Town Clerk and City Surveyor of Rochester is gratefully acknowledged. As the time available for the excavation was limited, it was necessary to begin when the demolition of the premises was less than half completed and, in this connection, I must express my appreciation of the co-operation afforded by the demolition contractors, Messrs. Bennett Bros., of Gillingham. Financial assistance was provided by the then Ministry of Public Building and Works (now the Department of the Environment). The work of the excavation was carried out by members of the Lower Medway Archæological Research Group, by the pupils of Sir Joseph Williamson's Mathematical School and the Rochester Grammar School for Girls, whose hard work made this excavation possible.

The following year the demolition of the Mathematical School on the opposite side of the High Street made possible a limited amount of investigation, here also again by kind permission of the City authorities, and the results of these excavations are included in this paper.

## The Excavations

### 1. Western Area

(a) *Roman.* As the central area had been destroyed, archæologically speaking, by a deep modern basement, and as the eastern part of the site was not yet cleared, excavation was begun at the west end, where it was thought remains of early habitation might be expected. This hope was disappointed as, except for an area of flint and ragstone cobbling found in Trench 6 at a depth of 5 ft. 6 in. to the south of the cellar of no. 110, no trace of any sort of building was found. It is perhaps possible to interpret this cobbling as a yard belonging to a

* The Department of the Environment contributed to the cost of printing this paper.

building facing the High Street and destroyed by the digging of the cellar, but, if so, it must have been one of light construction as no trace of foundations was found.

The earliest features were the two small gullies, R.10 and R.11, and the ditch, R.12, into which the latter gully ran. These all contained pottery of the first century A.D. and were presumably for drainage. During the second century the whole of the area was extensively used for rubbish disposal and pits dug for this purpose were numerous. Over the southern part of the area these pits were sealed at an average depth of 4 ft. 6 in. from the present surface by a layer of yellow subsoil of a thickness which varied from 15 in. to 3 in. and which became thinner towards the north, disappearing at a point about 65 ft. from the High Street. This was clearly the result of an extensive excavation nearby and is interpreted as trampled up-cast either from the Phase I ditch, which lies about 80 ft. to the south, or from the construction of the Phase II wall and wall-bank which are even closer. The latter hypothesis is preferred in view of the pottery from this layer which included colour-coated, Rhenish, red-ware and flanged bowls suggestive of a third-century date. This dating is supported by a coin of Tetricus (270–273), from the same layer. This might be an indication that the Phase II wall was built rather later than hitherto supposed,[1] but this evidence is not conclusive because the layer is a thin one and the coin not therefore strictly sealed. The later Roman period is represented only by a layer of brown 'top-soil' containing a mixture of third- and fourth-century sherds and by a pit (R.13) of third-century date. It would appear, therefore, that the south-eastern corner of the Roman town remained unoccupied, possibly because it was thought desirable to keep a strip immediately inside the walls clear of houses.

(b) *Medieval.* The main feature, the precinct wall of the Priory, was found, as expected, running roughly parallel to the High Street, at a depth of 3 ft. 3 in. from the present surface in Trench 5. This wall, the construction of which was authorized by Edward III in 1345, had previously been traced in 1887,[2] at a point opposite the choir of the Cathedral, when some 85 ft. of it were uncovered. There it was recorded as being 15 ft. from the High Street but here its northern edge was 52 ft. from the pavement. Only the foundation remained, composed of chalk and rubble in a soft light-brown mortar and this was 5 ft. wide and 4 ft. 8 in. deep on the north side, rather less on the south. Fortunately, it was possible also to locate the junction of this wall with the east wall of the city, which occurred at a point 56 ft. from the edge of the present pavement in Trench 8. Here the foundation was at a considerably higher level, owing to the Roman wall-bank which had not

[1] *Arch. Cant.*, lxxxiii (1968), 76.
[2] *Arch. Cant.*, xviii (1889), 201.

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Fig. 1.

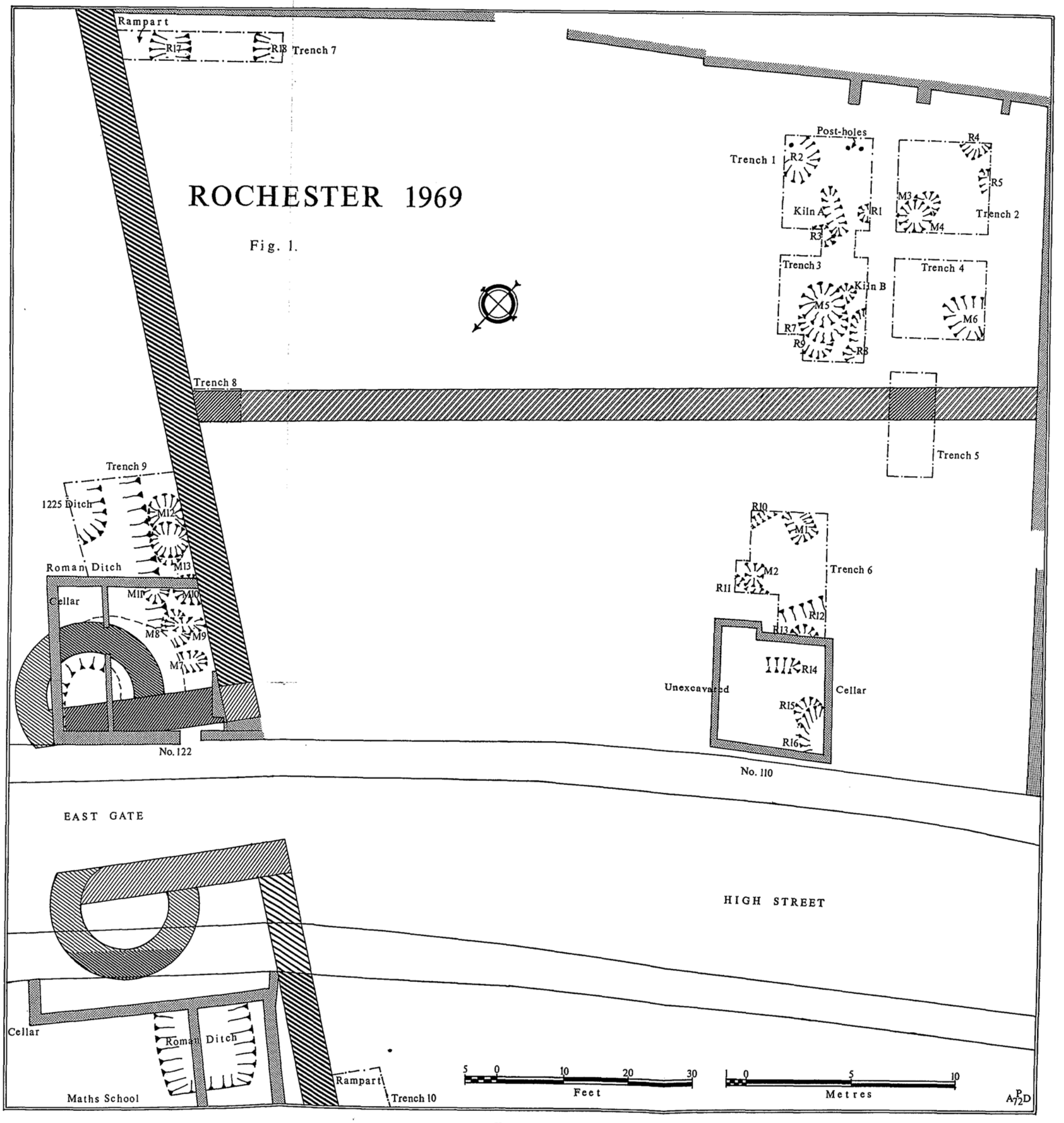


FIG. 1.

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been cut through, and had been much damaged, but it was possible to trace its south edge for 6 ft. to the west. It was thus possible to plot the course of this wall over the whole of the area (Fig. 1).

About 30 ft. to the south of the precinct wall in the area which, from the wording of the 1345 charter, is known to have formed part of the monks' garden, was a line of substantial post-holes of early medieval date (Trench 1). In front of these, and, very possibly, to be connected with them, were two kilns for the manufacture of clay loom-weights, one of which, Kiln A, clearly represented an unsuccessful firing as the batch of about 40 weights was *in situ* (Fig. 2, and Pl. I). This kiln was intact, but Kiln B in Trench 3 had been empty when it was partially destroyed by a later pit. As it would appear that this is the first time a site for manufacturing these weights has been recorded, it has seemed worthwhile to give a fairly detailed description.[3] The design was extremely simple, consisting merely of a trench 7 ft. by 3 ft. 6 in. and 2 ft. deep cut into the soil and lined with clay. This lining was quite thin in A but in B, which had been used and re-lined at least three times, it was several inches thick and incorporated four 'waster' weights as well as some very useful pottery. The trench had then been filled with a mixture of fuel and weights and fired from the south end. It is not quite certain whether the trenches were roofed over, though numerous fragments of daub recovered from the area suggest that this was so. Alternatively, it is possible that the trenches were left open until the fire was well alight and were then banked up with clay to slow down combustion as in primitive pottery manufacture. A date of *c.* 1100 A.D. is suggested for the kilns (see Fig. 14 and p. 144, below). Six rubbish-pits (M1–6), some of considerable size, were found in the area.

2. Eastern Area

(a) *Roman.* The opportunity was taken to cut a long section (Trench 7) through the earth-works inside the Roman city wall, parts of which survive here to a considerable height as a result of having been incorporated in the seventeenth-century building now demolished. While the general picture (Fig. 3, Pl. II) was much the same as from previous excavations inside the wall[4] it was more complete and there

[3] Two rows of Saxon loom-weights, numbering 30 and 32 respectively and nearly 10 ft. in length, were found at Grimstone End, Pakenham, Suffolk, and were interpreted by the excavator as being piled ready for firing rather than as having fallen from a loom, because in his view the width was too great for a shuttle to have been used. This argument, however, is invalid as shuttles were not usually employed with the warp-weighted loom, and it seems more likely that these weights did in fact comprise a wide loom. (See N. Smedley, G. M. Knocker, S. E. West and B. J. W. Brown, 'Excavations at Grimstone End, Pakenham', *Proc. Suffolk Inst. Arch.*, xxvi (1954), 198–9, pl. xxiv.)

[4] *Arch. Cant.*, lxxxiii (1968), figs. 4 and 6.

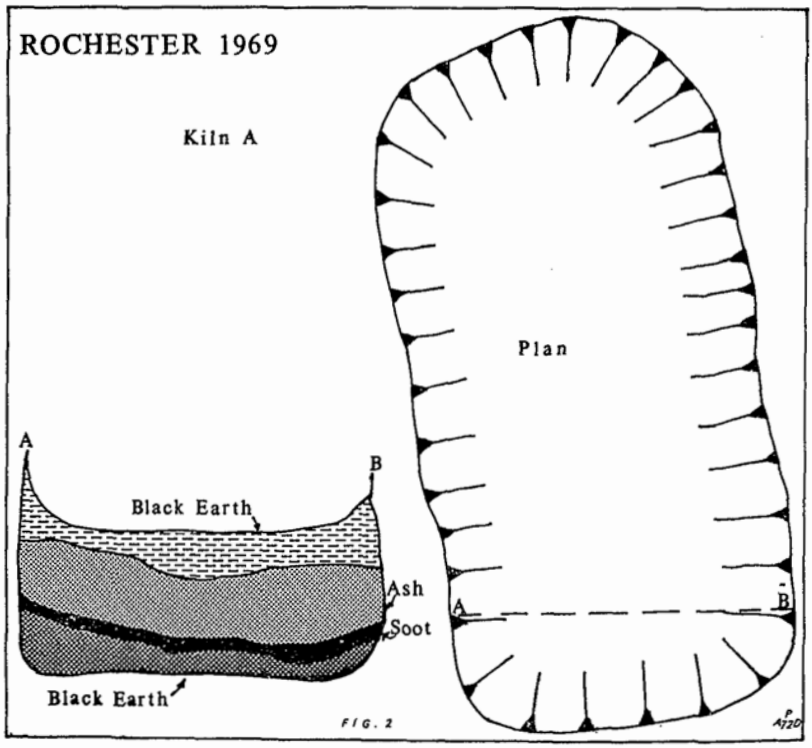


FIG. 2. Scale: 1 in. = 2 ft.

were some additional points of interest. The profile of the Phase I rampart was here nearly complete except in front where it had been cut away to make room for the building of the wall. It comprised a sloping bank of subsoil with the same revetment of laminated clay in front which has been observed elsewhere,[5] 6 ft. 3 in. high at its highest remaining point and 23 ft. 6 in. in length. Owing to its having been cut away in front there were no post-holes remaining from the palisade which it seems reasonable to assume was there. This rampart had been enclosed in the bank of earth piled up inside the wall after it was completed. Neither the original height nor the length of this wall-bank could be determined, but from the angle of the tip-lines its length cannot have been less than 40 feet. Pottery from both the wall-bank and the Phase I rampart was scarce but the contents of the two rubbish pits (R.17 and R.18) sealed beneath the latter confirm the suggested late second-century date for Phase I. The wall, as elsewhere, stood on a

[5] *Ibid.*, 57 and 62.

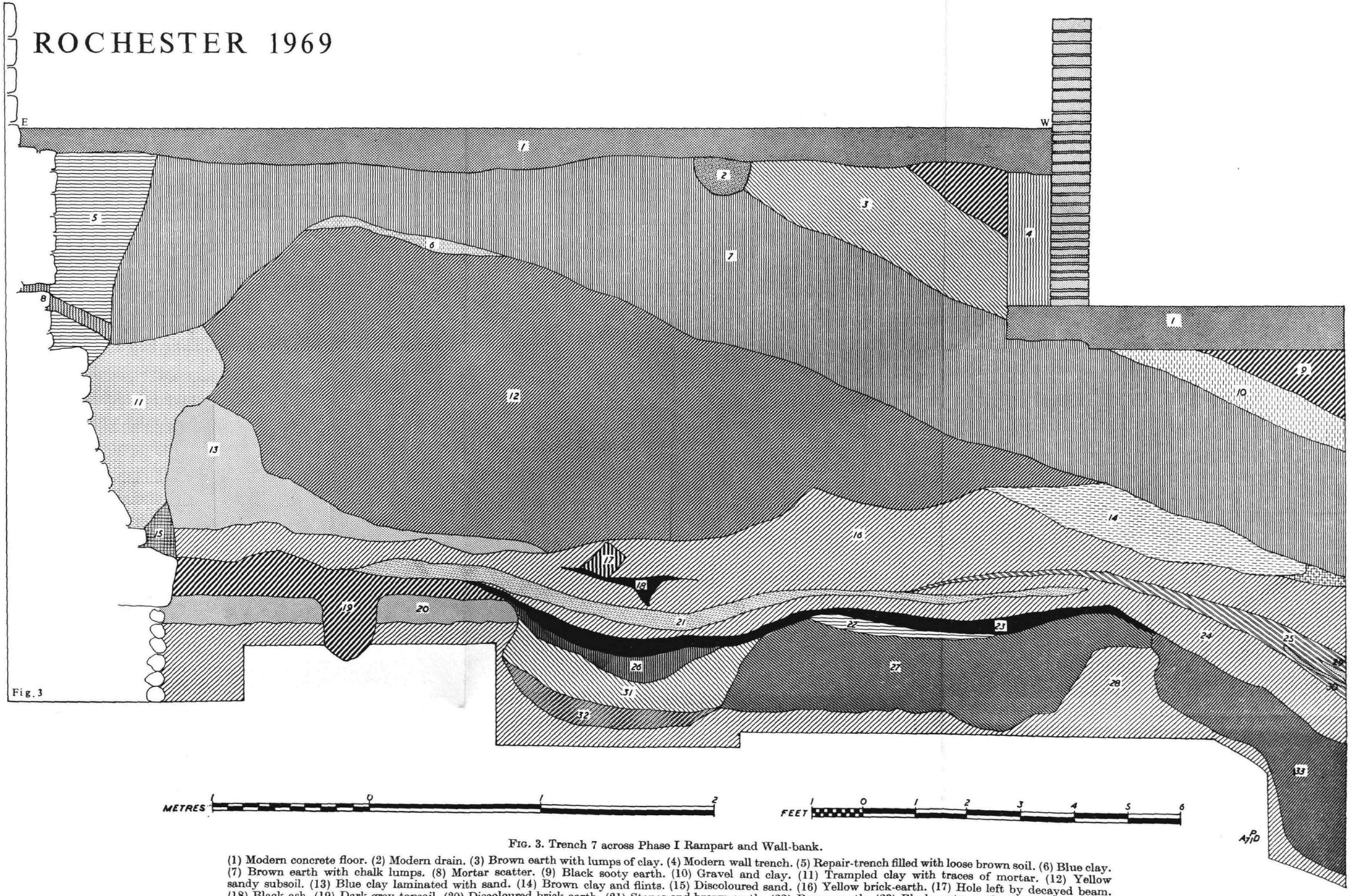


FIG. 3. Trench 7 across Phase I Rampart and Wall-bank.

(1) Modern concrete floor. (2) Modern drain. (3) Brown earth with lumps of clay. (4) Modern wall trench. (5) Repair-trench filled with loose brown soil. (6) Blue clay. (7) Brown earth with chalk lumps. (8) Mortar scatter. (9) Black sooty earth. (10) Gravel and clay. (11) Trampled clay with traces of mortar. (12) Yellow sandy subsoil. (13) Blue clay laminated with sand. (14) Brown clay and flints. (15) Discoloured sand. (16) Yellow brick-earth. (17) Hole left by decayed beam. (18) Black ash. (19) Dark-grey topsoil. (20) Discoloured brick-earth. (21) Stones and brown earth. (22) Brown earth. (23) Black sooty earth. (24) Yellow brick-earth seal of pits. (25) Grey earth. (26) Clay. (27) Discoloured brick-earth. (28) Clean brick-earth subsoil. (29) Chalk. (30) Yellow sand. (31) Grey occupation material. (32) Discoloured clay. (33) Grey occupation material.

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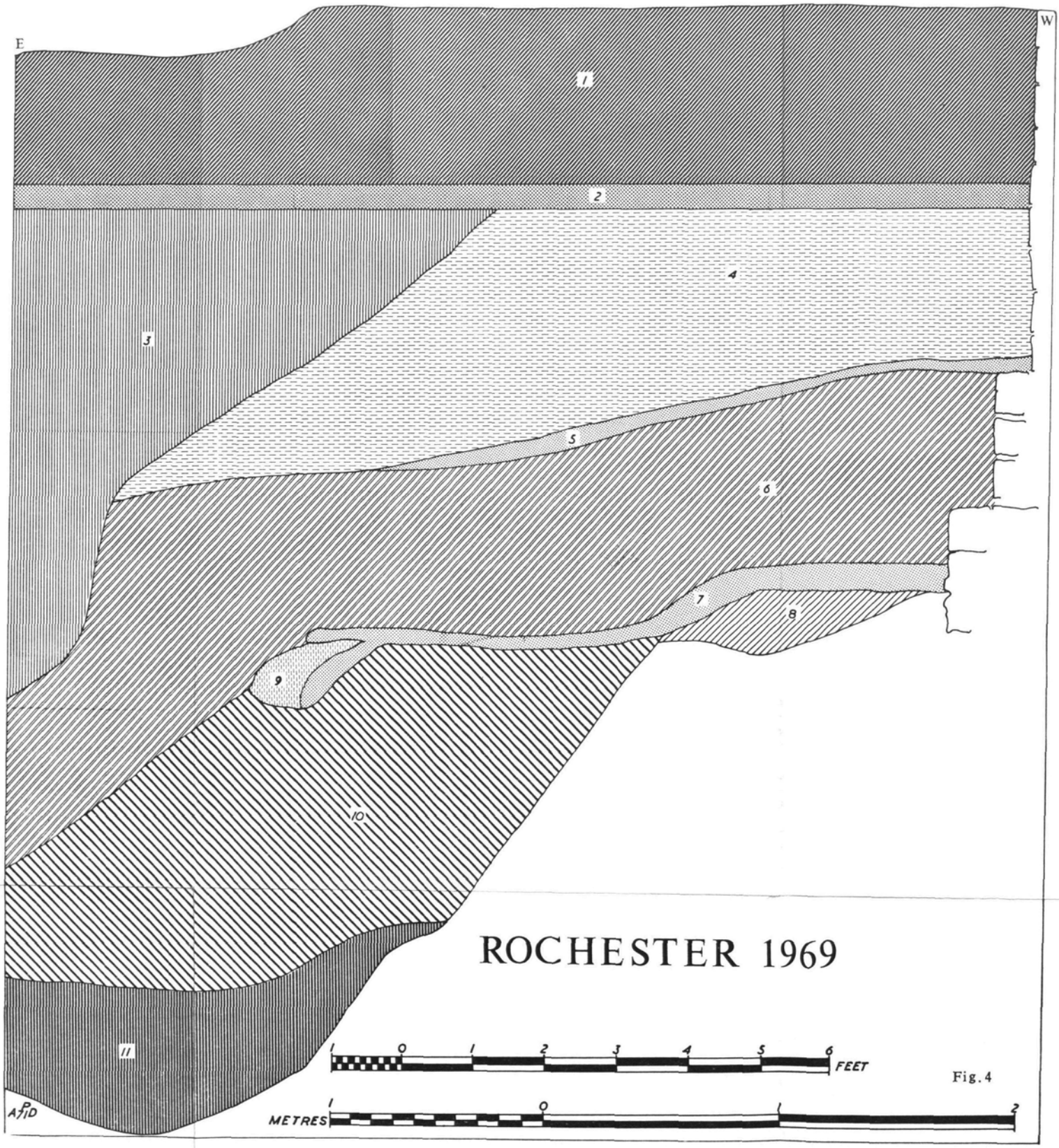


FIG. 4. Trench 9, Ditch Section.

(1) Modern débris. (2) Concrete floor. (3) Eighteenth-century pit. (4) Grey earth. (5) Mortar scatter from robbing of wall facing-stones. (6) Brown earth filling of medieval ditch. (7) Flints. (8) Brown earth. (9) Mortar and clay. (10) Blue clay and brick-earth filling of Roman ditch. (11) Silt.

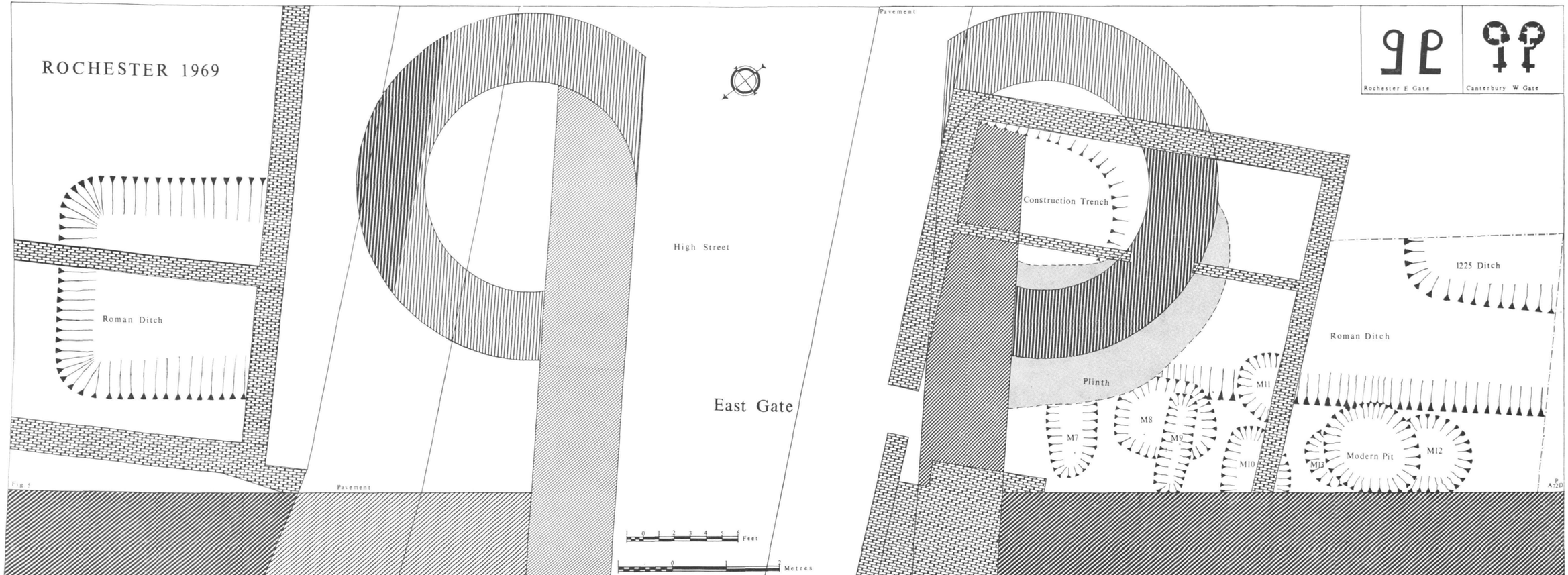


FIG. 5.

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concrete raft, 15 in. thick, which rested upon a foundation trench 2 ft. 1 in. deep filled with layers of rammed flints. The wall itself sloped at a slight angle as far as its first offset, which occurred at 3 ft. 9 in., and for a further 9 in. above it. At this point, there was clear evidence that the wall had collapsed and been rebuilt. After a thick layer of mortar, the character of the masonry changed, the joints being no longer finished flush with the stones, and the wall-face became vertical. Furthermore, as shown in the section, the wall-bank had had to be dug back in order to make the stump of the damaged wall accessible for repairs. This horizontal break in the wall was traced for 66 ft. to the north and may well have extended to the East Gate. The cause of the collapse is conjectural, but it seems possible that it was due to the wall being set too close to the edge of the Phase I ditch. The few scraps of pottery recovered from the fill of the repair-trench were suggestive of the first half of the third century, but the date may well have been later.

Outside the wall the Phase I ditch was sectioned in three places. Of these the two nearest the Gate had been truncated by the cellar of no. 122 High Street but, the one furthest south in Trench 9, gave a complete profile of the west side of the ditch (Fig. 4 and Pl. III) which had originally been approximately 17 ft. wide and 8 ft. deep. As elsewhere,[6] this had been back-filled with material cut away from the Phase I rampart. There was, however, a deposit of silt nearly 2 ft. in depth at the bottom and pottery from this (Fig. 4) also suggests that the ditch was open during the last years of the second century or the early years of the third. It should be mentioned that the ditch continued to the north under the existing pavement and that no trace was found of the Roman East Gate or roadway.

The outer face of the Roman city wall was exposed in Trench 9. Although part of the facing had been robbed and replaced by brickwork, enough remained to show that the lowest courses consisted of blocks of ragstone much more massive than the squared ashlar used higher up (Pl. IV). This fact is important for the interpretation of the stretch of the east wall on the north side of the High Street which is discussed below (p. 128).

(b) *Medieval.* In the south-east corner of Trench 9 the edge of the 1225 A.D. ditch[7] was found cutting into the filling of the Roman ditch mentioned above. The section-drawing (Fig. 4) shows this relationship. The sloping surface of the ditch had been cut into shallow steps, presumably to facilitate the removal of spoil during its construction. In the cellar of no. 122 High Street (Fig. 5) the earliest architectural feature was a foundation of rammed chalk projecting nearly at right-

[6] *Ibid.*, 60, 62.
[7] *Arch. Cant.*, xxi (1895), 51, and xxiv (1900), 12–15.

angles from the line of the city wall. This was 2 ft. thick, 5 ft. 6 in. wide and extended for more than 21 ft. to the east. It did not produce any dating evidence but is thought to have been the foundation of an early medieval Gate House of rectangular shape. Against this had been abutted a very solidly constructed masonry foundation of flint and ragstone set in a pale yellow mortar (Pl. V). Its shape was rather more than a semi-circle, its width 4 ft. 9 in. with a projection 2 ft. 8 in. wide 1 ft. below its top surface and its total depth was 5 ft. 6 in. The projecting flange, which was certainly of the same build as the rest, is a curious feature in that there would seem to have been a change of plan while building was in progress. Starting 1 ft. below the top surface at the north-west extremity, it was level for several feet on the outside of the curve but then sloped away rapidly and disappeared just inside the smaller cellar. On the inside curve the slope began almost immediately and the flange terminated at about the same point. Yet, both inside and outside, a trench had been dug wide enough to accommodate the flange, a trench subsequently filled with clean red gravel. This foundation, taken in conjunction with the similar curved foundation described by Canon Livett[8] and, until recently, still partly visible on the opposite side of the High Street (Pl. VI), clearly formed part of the southern drum-tower of the later medieval East Gate, which is shown with a pointed arch-way between tall flanking towers in William Smith's drawing of Rochester, dated 1588.[9] There was a number of medieval rubbish-pits (M7–M13) in the vicinity of the Gate and one of these (M7) was cut by the curved foundation. The pottery from this pit, therefore, which is of thirteenth-century date (see p. 150, below) provides a *terminus a quo* for the building of the tower.

On the small undisturbed area in the centre of the tower foundation were the remains of a hearth which had clearly been used for iron smelting, as quantities of iron slag were recovered from its ashes. A coin of Honorius sealed beneath it makes it improbable that it was Roman, and it must be earlier than the construction of the drum-tower as it was cut by the foundation-trench, so an early medieval date seems probable.

3. Northern Area

*Roman.* As the Phase I ditch had been seen to continue to the north under the present pavement, it was thought worthwhile to try to trace it on the other side of the High Street, where it was found to continue to the north for 18 ft. from the building-line before terminating (Fig. 5). The silt of the ditch produced late second-century pottery. The building of the Mathematical School had destroyed all stratification

[8] *Arch. Cant.*, xxi (1895), 52 and pl. III.
[9] *Arch. Cant.*, vi (1866), 54.

*Photo: R. G. Foord*

Plate I. Kiln A, showing Loom-weights *in situ*.

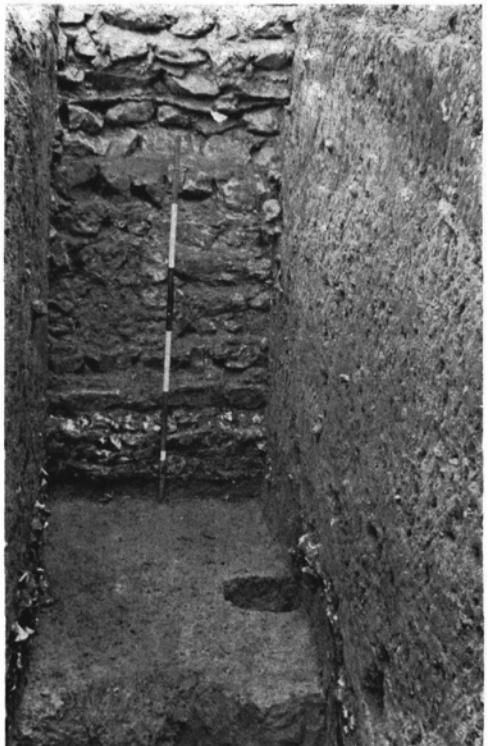

*Photo: R. G. Foord*

Plate II. Section through Rampart inside Roman Wall.

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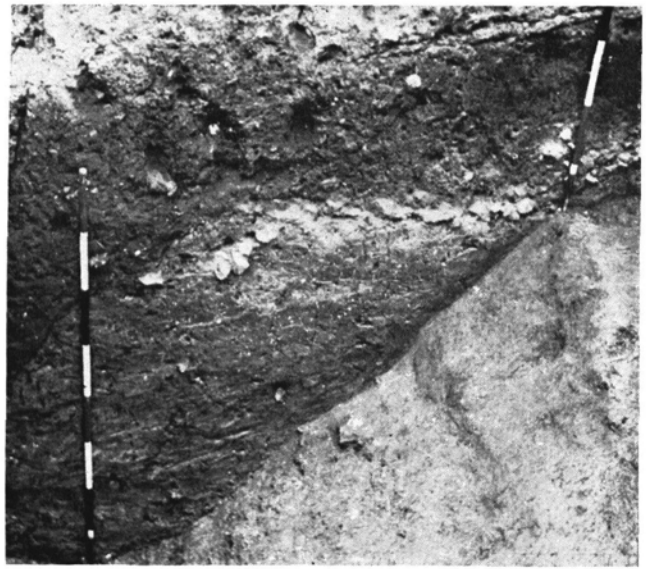

*Photo: A. P. Detsicas*

Plate III. Section through Ditch outside Roman Wall.

*Photo: A. P. Detsicas*

Plate IV. Outside Roman Wall, showing massive Foundation Courses.

except for the lowest 5 ft. of the ditch itself, and to investigate the possibility that the end of the ditch marked the position of an entrance through the Phase I defences a small excavation, Trench 10, was made inside the wall (Fig. 5). The Phase I rampart, however, was found to continue unbroken, as did the Phase II wall, though here reduced to its foundation courses. (The implications of this are discussed below.) Sealed beneath the rampart was a layer of burnt material with a considerable quantity of iron slag and late second-century pottery.

*The City Wall.* From the East Gate to the drum-tower at the north-east angle the wall of the city is well preserved. All that is now visible is of one period of building, and it is thought to be of fourteenth-century date, but it clearly follows the line of the Roman wall now revealed to the south of the High Street. A curve in the wall near to the corner indicates that its Roman predecessor ended in a rounded corner similar to the south-eastern corner visible in Eagle Court. Below ground, it has been the subject of a number of small excavations (Fig. 6 A, B, C, D, E, F) between 1960 and 1971, all of which have presented the same general picture. Trench F (Fig. 7) which was dug in 1960[10] is worth illustrating as typifying the others, though in the trenches nearest to the East Gate all stratification had been destroyed. Clean brick-earth was reached at a depth of 10 ft., overlaid by a patch of cobbling, the western margin of which ran roughly parallel with the wall and about 12 in. from it. Pottery from the make up of this cobbling is Roman, dating from the latter part of the second century, and it was covered by a layer of sterile green clay, containing small pieces of carbonized twigs. Through this clay had been dug the foundation-trench of the earliest wall, 2 ft. 4 in. in depth and filled with layers of rammed flints set in a blue-green clay, similar to that used to revet the Phase I rampart. A spread of mortar droppings and small pieces of ragstone ran up to the foot of the wall, overlaying the clay. The wall was faced with blocks of roughly squared ragstone set in a hard brown mortar. The lowest course was offset by 6 in. to form a plinth 8 in. deep and three courses remained above this (22 in. in all). The whole structure was tilted outwards indicating that the wall had collapsed at this point. A layer of dark earth containing pottery of thirteenth- or early fourteenth-century date lay against this earliest wall and, presumably, marked the ground level from which rebuilding took place, though no mortar-scatter had survived, presumably because, when the ditch was filled in in the seventeenth century, its edge was dug away. (This suggestion is strengthened by the fact that the mortar of the wall showed weathering for 4 ft. below the present ground level, indicating that the lip of the medieval ditch reached this point.) Above this layer

[10] Trenches A and C were dug in collaboration with Mr. C. R. Flight, B.A., cf. *Arch. Cant.*, lxxvi (1961), lxxiii.

there were no stratified deposits. On the stump of the earlier wall had been built 6 ft. of unfaced and rough rubble walling with a slight batter. The material was largely rubble from the collapsed wall with the hard brown mortar still adhering to it and contrasting strongly with the soft white mortar in which it was reset. The faced medieval wall rested on this rubble walling and was set back 6 in. from it. Trench E was similar in all respects except that there were mortar-droppings adhering to the stump of the first wall. In Trench D, the Roman levels had been entirely dug away, but six courses survived to a total height of 4 ft. 6 in., with only one course of the rubble-walling required before the faced wall above. In Cuttings A, B and C there was no stratification, and the rubble walling was absent, the faced wall resting directly upon the top of the first wall, here surviving for seven courses. The identification of the earlier wall with the Roman city wall would have seemed obvious but for one fact. The masonry seemed to differ in character from that of the south-eastern corner, long recognized as Roman: the stones were larger and more irregular and the coursing less exact. However, the discovery in 1971 that the lower courses of the south-eastern wall were of the same character (Pl. IV) has removed the difficulty, and it is now evident that the whole of the medieval wall between the East Gate and the north-eastern corner stands upon the lower courses of the Roman wall with the drum-tower taking the place of the original rounded corner.

The medieval wall is 7 ft. wide and 20 ft. high to the foot-walk, with the external facing of the coursed ragstone and dressed flint intact. The put-log holes are well preserved at intervals of 12 ft. horizontally and 4 ft. vertically. The internal facing, however, is destroyed or modern. A considerable length of the crenellated parapet remains with seven of the original embrasures and one side and the sill of an eighth. The parapet is 5 ft. 6 in. high and 2 ft. thick, with a triangular-sectioned coping 1 ft. 6 in. high of two courses of ragstone ashlar; the embrasures, spaced at intervals of 12 ft., are 2 ft. wide with ashlar quoins and ashlar sills, chamfered on both edges, 3 ft. above the foot-walk.

The drum-tower at the north-east angle is of one build with the wall and, in its present state, of the same height, the foot-walk being continued around the top of the tower; originally, it was at least one storey higher (Fig. 8, and Pl. VII). Entry into the tower was by a doorway on the south-western side and the fact that this doorway is only a few inches below the present ground level suggests that there was an internal wall-bank. The doorway has a two-centred arch, rebated internally and with a double chamfer externally (Pl. VIII). The left-hand jamb is original, but the right-hand has been patched. To the right of the doorway is a small square-headed window, blocked within the last few years. Through the doorway is a small vaulted

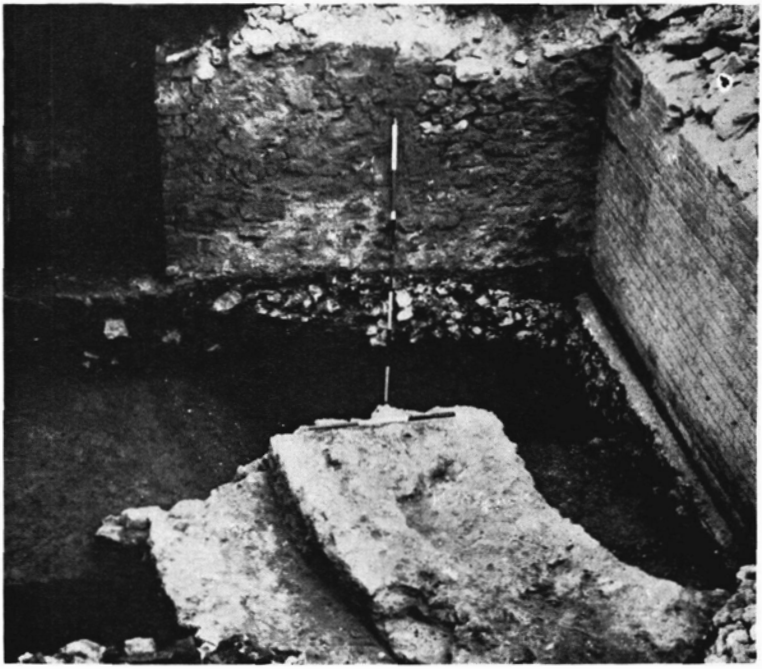

*Photo: A. P. Detsicas*

Plate V. Cellar of 110 High Street, showing (1) Roman Ditch; (2) Chalk Foundation; (3) southern Drum-tower of Gatehouse.

Plate VI. East Gate: Northern Drum Tower.

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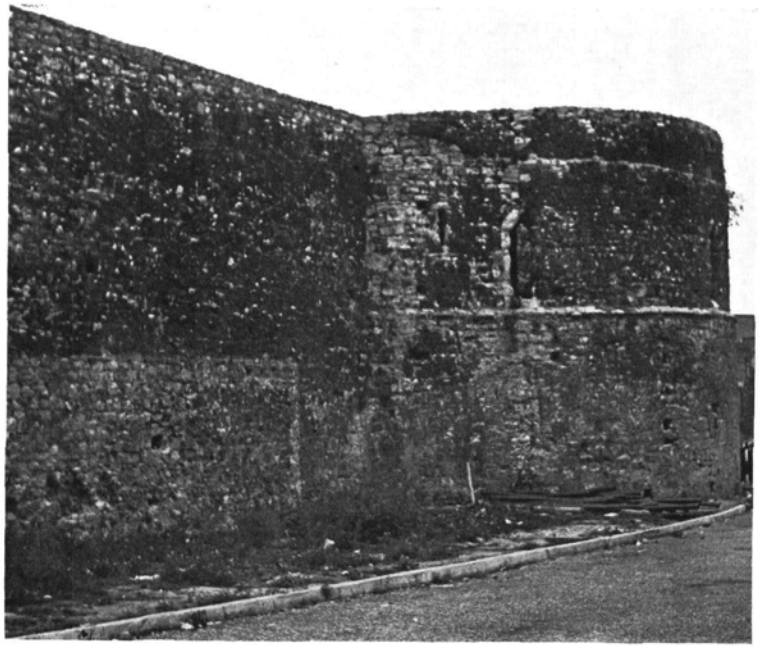

*Photo: A. P. Detsicas*

Plate VII. North-eastern Corner Turret.

*Photo: A. P. Detsicas*

Plate VIII. Doorway of Corner Turret.

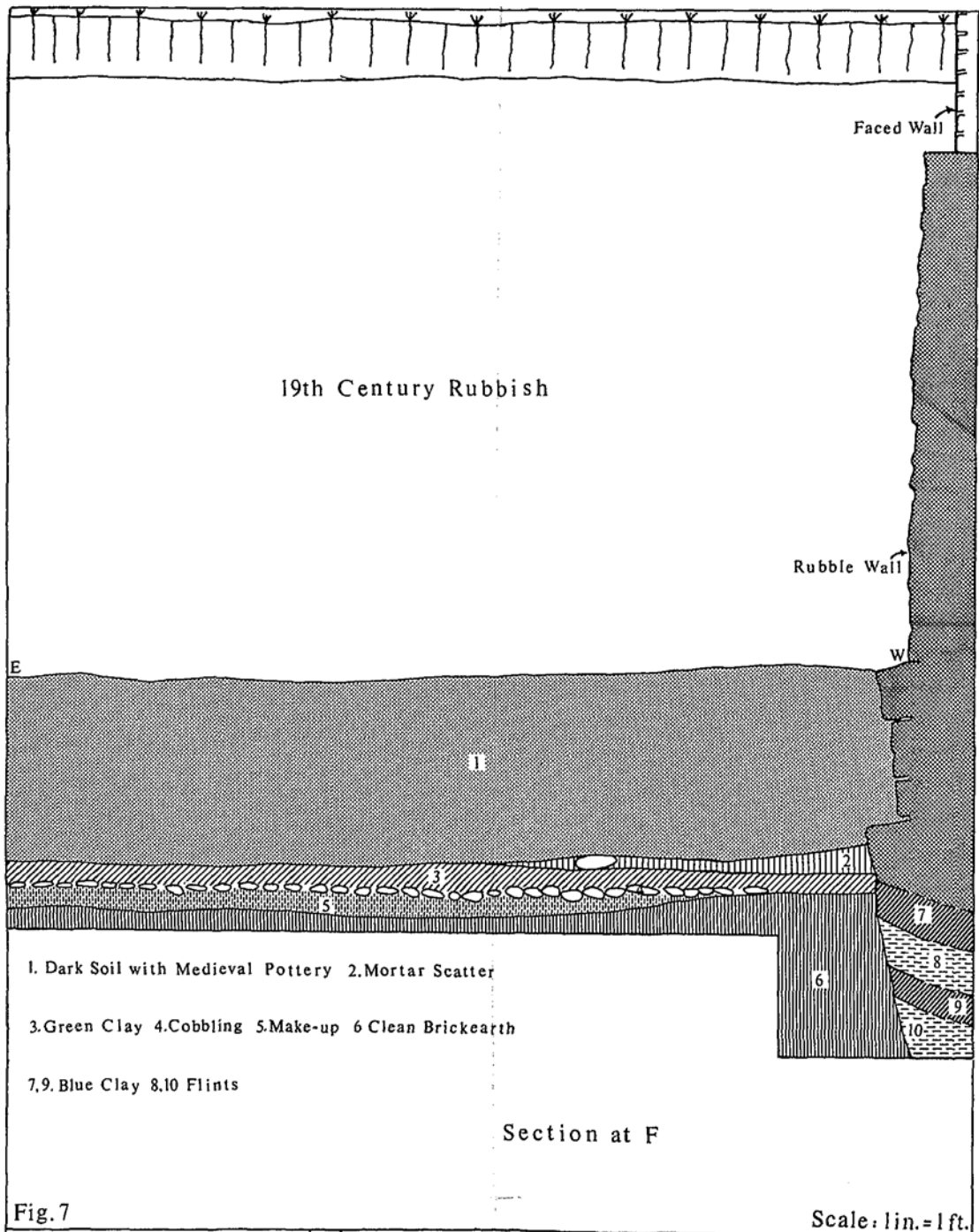


Fig. 7

Scale: 1 in. = 1 ft.

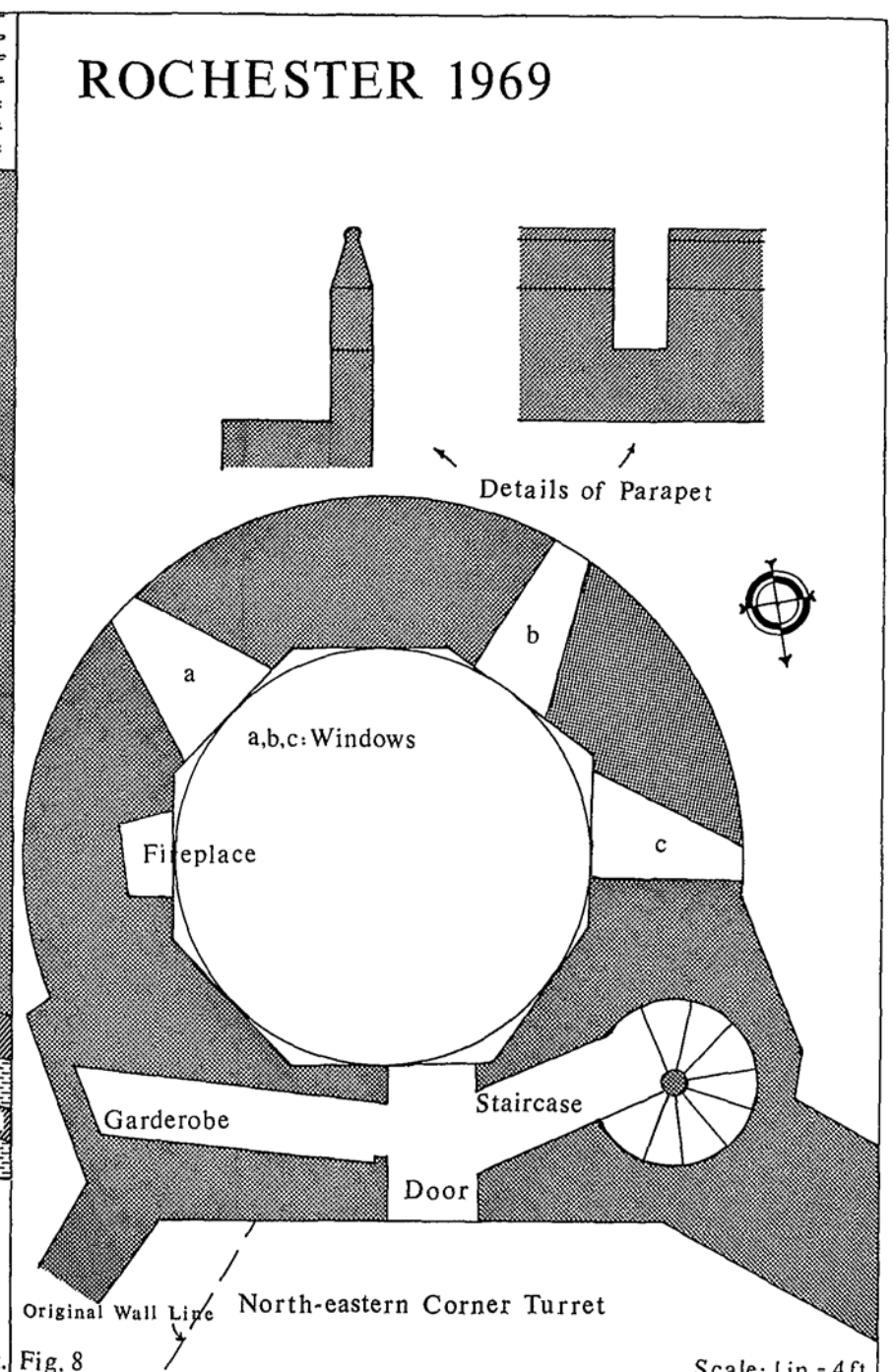


Fig. 8

Scale: 1 in. = 4 ft.

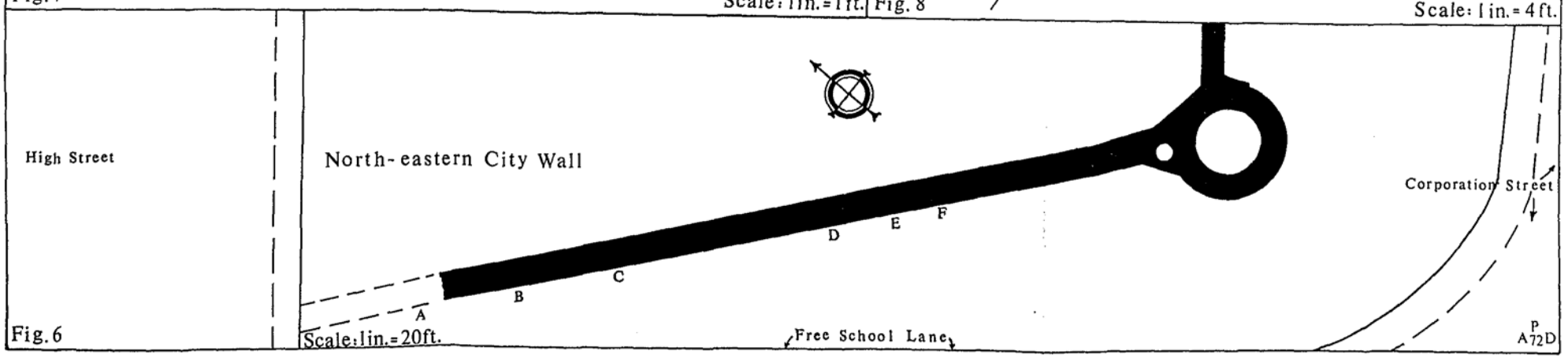


Fig. 6

Scale: 1 in. = 20 ft.

FIGS. 6, 7 and 8.

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vestibule built into the thickness of the wall. On the left, a narrow vaulted passage leads to a garderobe, lit by a square-headed window. The supports for the wooden seat remain but the shaft has been filled in. To the right of the vestibule another passage leads to the foot of a newel staircase giving access to the east wall and to the upper stage of the tower and lit by a third square-headed window. Finally, in the north-east side of the vestibule is a much-restored doorway leading into the well of the tower.

The existing upper stage of the tower, 11 ft. high, is octagonal internally, with sides 6 ft. long. It was lit by three two-centred windows with trefoil-cusping, rebated internally for shutters. In the north-west side is a fireplace, restored in brick. It would appear that the floor-joists were supported on the ledges formed where the octagonal upper storey meets the circular lower one as there are no holes or corbels at floor level. Externally, the whole tower is circular with a chamfered string-course 13 ft. above present ground-level running just below the sills of the windows in the upper stage, above which the face is set back 6 in. This string-course continues around the projecting sides of the staircase-turret between the south side of the tower and the east wall, but is absent from the broad pilaster-like strip of masonry carrying the shafts from the two garderobes (one already described and the other presumed to have been in the destroyed upper storey), which discharged into the ditch through two square openings under a relieving arch.

## Discussion

*Roman.* The effect of these investigations has been to confirm rather than to alter the suggestions previously made as to the development of the Roman defences. A virtually complete profile has now been obtained of the Phase I rampart and ditch, and the date seems fixed in the last quarter of the second century or a very little later. It is still not possible to narrow down the date for the building of the Phase II wall, though the evidence from the layer of trampled subsoil inside it (see page 122, above) suggests, but not conclusively, that it might have been built rather later than hitherto supposed. It is interesting to find that the south-east section had to be so extensively rebuilt and satisfactory to have been able to establish that the Roman wall underlies the medieval wall from the East Gate to the north-east corner.

The real difficulty that remains concerns the entrance to the city in both phases. The Phase I ditch continued northwards under the medieval gate-house and was found to finish 18 ft. to the north on the other side of the road, and it seems hard to believe that it is not continuous between these points. If that is so, the entrance ought to

have been at the point where the ditch stops, but no evidence for this was found and the rampart certainly continued past the end of the ditch. It is true that this need not have been a large overlap and also true that the nineteenth-century Mathematical School building could well have removed all trace of a roadway (it will be remembered that only 5 ft. remained of the ditch, originally at least 8 ft. deep), but the fact remains that, at present, the only evidence for an entrance here is the fact that the ditch came to an end at this point. It is also quite clear that the Phase II wall did not have its entrance where the Phase I ditch ended. The Roman masonry was found unbroken on the outside as was the foundation in the small excavation, Trench 10, made inside the wall. The conclusion therefore seems inescapable that the Roman gateway coincided more or less with its medieval successor. The possibilities are discussed in the appendix below, contributed by Mr. A. P. Detsicas, M.A., F.S.A. There is no doubt that the 'lower foundations' on the north side of the High Street, described by Canon Livett,[11] which he thought might be part of the Roman gatehouse, were in fact a projecting flange on the fourteenth-century drum-tower, similar to that uncovered to the south.

*Medieval.* The only unexpected point about the 1345 precinct wall was its position, lying as it did over 50 ft. to the south of the High Street, from which it would seem that a strip of land along the line of the road must have come into lay ownership, or at least occupation, by the fourteenth century. (The Saxon charter of 604[12] had granted the whole of the south-eastern quadrant of the city to the church of Rochester.) The discovery of the loom-weight kilns inside the monastic precinct is an interesting, if minor, addition to our knowledge of the activities of the Priory. The most important discovery, however, was that of the southern half of the gate-house[13] which has enabled this to be planned with a fair degree of certainty (Fig. 5). From this, it is clear that it was a massive building, comparable in size and appearance with the surviving West Gate at Canterbury, a block plan of which is shown for purposes of comparison. From the evidence of the pottery from Pit M7 its construction cannot have been earlier than *c.* 1300. Thus, the rebuilding both of the gate-house and of the wall between it and the north-eastern corner has been shown to have occurred in the fourteenth century, and it seems reasonable, therefore, to suppose

[11] *Arch. Cant.*, xxi (1895), 52 and pl. III.

[12] Quoted in 'A note on the Mead Way, The Street and Doddinghyrnan in Rochester', by the late Dr. Gordon Ward, M.D., F.S.A. *Arch. Cant.*, lxii (1949), 37–44.

[13] Canon Livett's 'strong suspicion that the foundations of the tower on the south side of the gate underlie Mr. Leonard's cellars' has been abundantly justified.

that both were reconstructed as part of a single extensive remodelling of the defences.[14] Any attempt at closer dating must depend upon the character of the work itself. Canon Livett suggested that the wall and corner-turret were built *c.* 1340,[15] but this may be too early. The architecture of the wall and of the corner-turret is not particularly distinctive, but one feature of the design occurs regularly in work of the last quarter of the fourteenth century, viz. the plan of the tower, circular externally and polygonal within. Dated examples of this feature include the West Gate at Canterbury[16] (1378); the gateway of the inner ward at Saltwood Castle[17] (1382); the north-eastern tower of the inner ward at Cooling Castle[18] (1381–2); the drum-tower of Bodiam Castle[19] (1385).[20] There was, in fact, a considerable amount of defensive building in the south-east during the early years of Richard II's reign in response to the danger of raids by the French,[21] and it seems not unreasonable to attribute the rebuilding of the East Gate and the adjoining wall, together with the additional corner-turret, to this period also.

There is no documentary evidence as to the date of the demolition of the East Gate. As mentioned above (see page 126) it was clearly still standing in 1588 but, by the time the Mathematical School was built in 1708,[22] it had been swept away, the ditch filled in and the road widened to cover the site of its northern drum-tower. A date fairly late in the seventeenth century seems most probable because in the title-deeds of no. 120 High Street, dated at the end of that century,[23] the bridge is mentioned as still in existence.

[14] In *Arch. Cant.*, lxxxiii (1968), 80–1, it is argued that the defences in the south-eastern and southern sections were put in order at about the same time.

[15] *Arch. Cant.*, xxi (1895), 56–7.

[16] *Arch. Journ.*, lxxxvi (1930), 242.

[17] *Arch. Cant.*, xxiii (1898), 56.

[18] *Arch. Cant.*, ii (1859), 95 ff. for documentary evidence, and *Arch. Cant.*, xi (1877), 132 and plan.

[19] W. D. Simpson, *Castles in England and Wales*, London, 1969, p. 96.

[20] Most of these examples are circular/hexagonal in plan, but the Canterbury West Gate towers are octagonal internally like the one under discussion.

[21] Between the Earl of Pembroke's defeat at La Rochelle in 1372 and the Earl of Arundel's victory at Cadzand in 1387, England virtually lost control of the Channel. Rye and Gravesend were sacked in 1377, and Winchelsea sacked and burnt in 1380.

[22] The original conveyance describes the area of the ditch purchased as 'garden ground'. The dimensions coincide exactly with those of the Victorian building demolished in 1970.

[23] Cited by Canon Livett, *Arch. Cant.*, xxi (1895), 52.

## Appendix

### The Roman East Gate: A Tentative Reconstruction

By A. P. Detsicas, M.A., F.S.A.

As it is very unlikely that, in present circumstances, any further excavation can be undertaken for any remnants of the Roman East Gate below the level of the High Street, an attempt is here made to reconstruct this structure on the basis of the established archæological evidence and the analogy of other town gates.

The two most likely possibilities are that either the original width of the gate was 29 ft. (8·84 m.), narrowed to 19 ft. (5·79 m.) in medieval times, or the original width was 19 ft. (5·79 m.) and remained unaltered in the medieval period. Of these two possibilities, the latter seems the least likely; for in this case the width of the gateway is too wide for a single-portal gate (at Colchester, the north-east gate is 10 ft. 8 in. (3·25 m.) wide; at Caerwent, the north and south gates are about 9 ft. (2·74 m.) wide), and one would have to assume a double-portal gateway with carriageways narrower than in other Romano-British towns. Though this is, of course, not impossible, it would seem unlikely in view of the fact that the East Gate, at one end of Watling Street, was the main entrance into the town on the highway from the Channel ports. If, on the other hand, the first alternative is considered, there is a striking identity in width (both 29 ft., 8·84 m.) between the Rochester East Gate and the Silchester West Gate; moreover, both gates date from about the same period. On these grounds, it is suggested that the Rochester East Gate may have been very similar to the Silchester West Gate in general, for no details have been established about the Rochester East Gate.

## THE FINDS

### I. Roman Pottery

#### (i) *Coarse Pottery* (Figs. 9–10)

By A. P. Detsicas, M.A., F.S.A.

Most of the coarse pottery found during the excavations was recovered in a number of pits, a few sherds were found stratified in layers undisturbed by medieval activity, others were completely unstratified or mixed with much later material; a few sherds are illustrated and

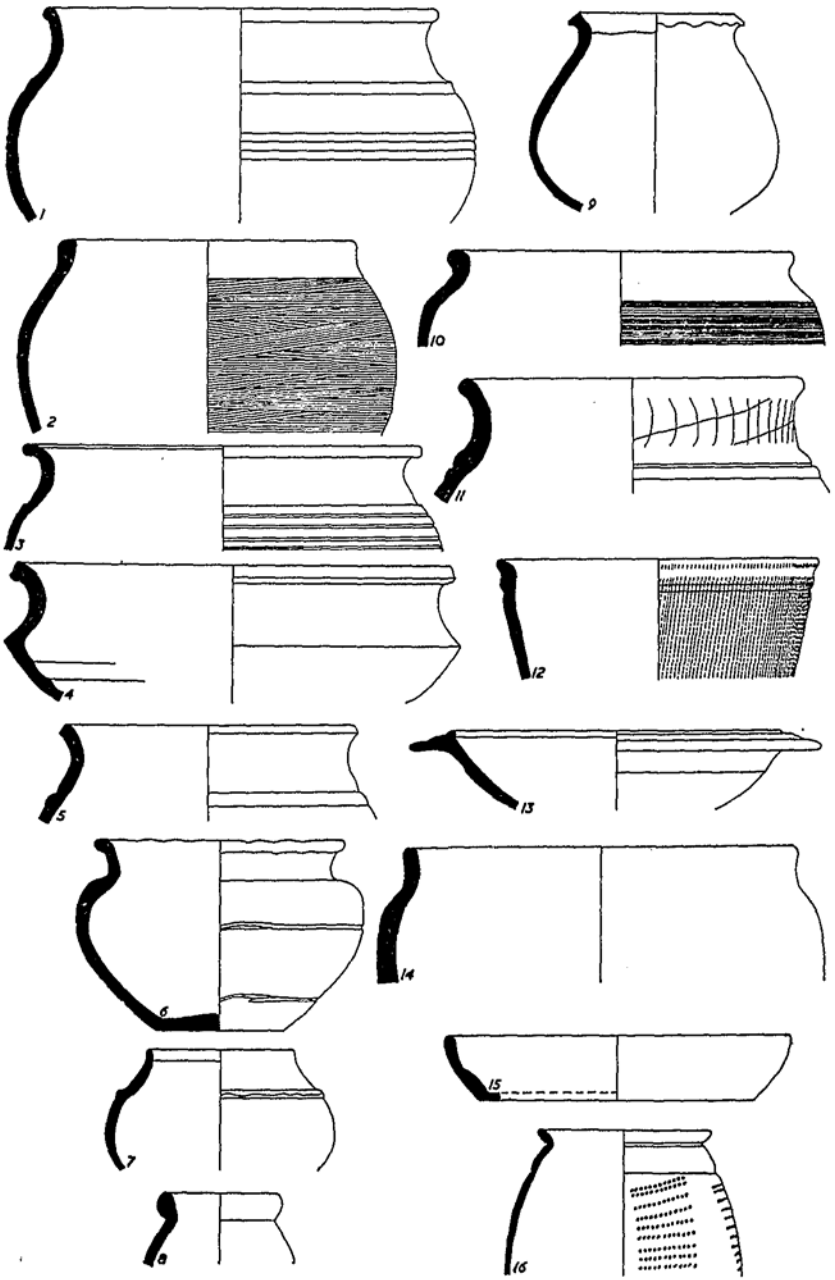


FIG. 9. Coarse Pottery (1/4).

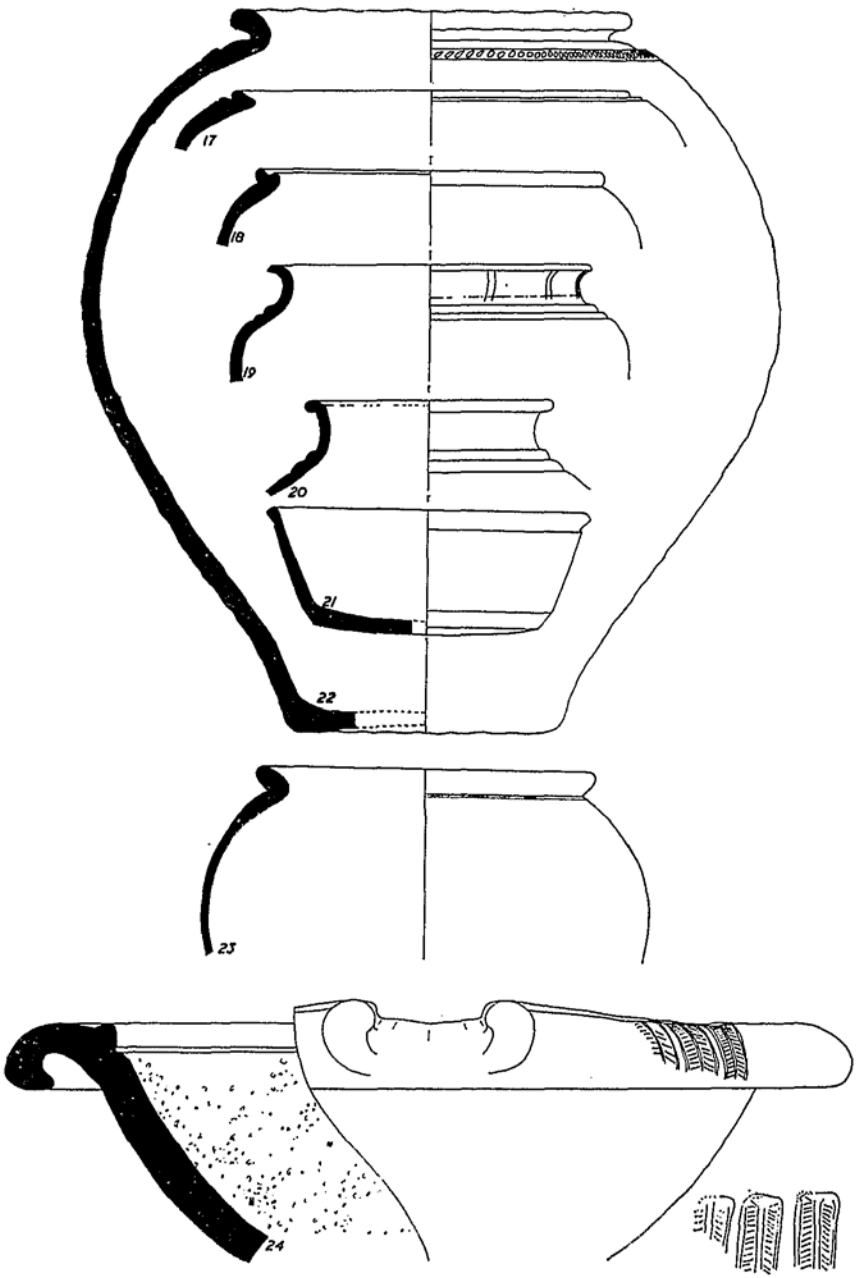


FIG. 10. Coarse Pottery ($\frac{1}{4}$).

described below. However, as most of these are standard types obtaining during the Romano-British period, no parallels are quoted.

1. Black sandy fabric with brown core, burnished externally; a bowl often found in second-century A.D. contexts, though it may have originated rather earlier.

2. Black sandy fabric and paste, with horizontal combed decoration, a type common in first-century A.D. layers though surviving much later.

3. Black fine sandy fabric, grey paste, with burnishing on the shoulder; this is clearly from an S-profile bowl, fully documented in the second century A.D.

4. Black sandy fabric, with brown core; probably late in the second century A.D.

5. Black sandy fabric, brown core, burnished externally; typologically, this bowl comes early in the S-profile series, perhaps dating from the last quarter of the first century A.D.

6. Red sandy fabric, grey core; burnished externally on rim and base.

7. Brown fabric and core; burnished externally.

8. Buff sandy fabric and core; a type obtaining from late first-century A.D. contexts onward.

9. Red fabric, grey core; buff slip externally, irregular rim.

10. Black fabric and core, burnished rim, with horizontal rilling.

11. Black fabric and core, burnished externally; like no. 5, above, this is a vessel in the series from which S-profile bowls devolved and may be dated from *c.* A.D. 75 onwards.

12. Grey fabric and core, burnished exterior with rouletted decoration; a type quite current in the second century A.D. and later.

13. Grey fabric and core; fairly common in second-century A.D. contexts.

14. Black gritty fabric, burnished inside and outside; likely to be a first-century type continuing into later contexts.

15. Brown fabric, grey core, burnished externally and internally; a shallow platter imitating true *terra nigra* or *terra rubra* vessels and datable to the late first century A.D.

16. 'Poppy-head' beaker in grey fabric; second century A.D.

17. Storage jar in red fabric and grey core; very common in the second century A.D.

18. Black gritty fabric and core, recessed for lid; second century A.D.

19. Dark brown fabric and core, burnished body; another of the S-profile series common in the second century A.D.

20. Red-grey fabric, grey paste; a bowl with a narrow neck abundantly known in second-century deposits.

21. Dish in black burnished ware, fully of second-century A.D. date.

22. Large storage jar in pink fabric with shell-filling and flaking internally; thumb-nail decoration round shoulder. A type of vessel very common in the second century A.D.

23. Black fabric and paste; second century A.D.

## (ii) *Mortaria* (Figs. 11–12)

By K. F. Hartley, B.A., F.S.A.

24. In cream fabric with black, grey and white trituration grit. The herring-bone stamp is from the same die as number 25.

25. In yellowish cream fabric containing flinty particles with grey, white and black flint trituration grit. There are three impressions from a well-known herring-bone die used at the Colchester potteries, *c.* A.D. 140–180 (M. R. Hull, *The Roman Potters' Kilns of Colchester*, fig. 60, no. 30).

26. Cream fabric with pink core. The fragmentary stamp is from a rarely used counterstamp of the potter DOINUS (see S. S. Frere, *Verulamium*, I, fig. 146, no. 46, for a drawing of a more complete example). Doinus worked at Brockley Hill, Middlesex, *c.* A.D. 70–110, but this die is likely to be one of his earlier ones, and *c.* A.D. 70–100 (*ibid.*, p. 375, no. 19, for further details of this potter).

27. Fine brownish pink fabric, white and black flint grit. Made in Kent or at Colchester perhaps before A.D. 150. The piece has suffered superficial burning.

28. In hard, fine-textured, drab greenish cream fabric with grey, white and black flint trituration grit showing very little wear. Colchester or Kent, *c.* A.D. 135–180.

29. In cream fabric with thick brownish pink core; there is no trituration grit and the vessel does not look used. The broken herring-bone stamp cannot be identified with certainty, but could be from the same die as a group of stamps recorded mainly in Kent and perhaps made there *c.* A.D. 130–180.

30. Cream fabric with thick brownish orange core; white trituration grit. Made in Kent or in Colchester, perhaps before *c.* A.D. 150. The vessel is hardly worn, if at all.

31. Cream fabric; no grits. Kent or Colchester. After A.D. 150.

32. Overfired to greyish green, almost vitrified on the outside; probably flint grit. This is a distorted and almost certainly unsaleable waster which should indicate the presence of a kiln in the area. It would be possible for others to be from the same source, particularly nos. 29, 30, 33, 35, 37 and 39, which show little or no wear.

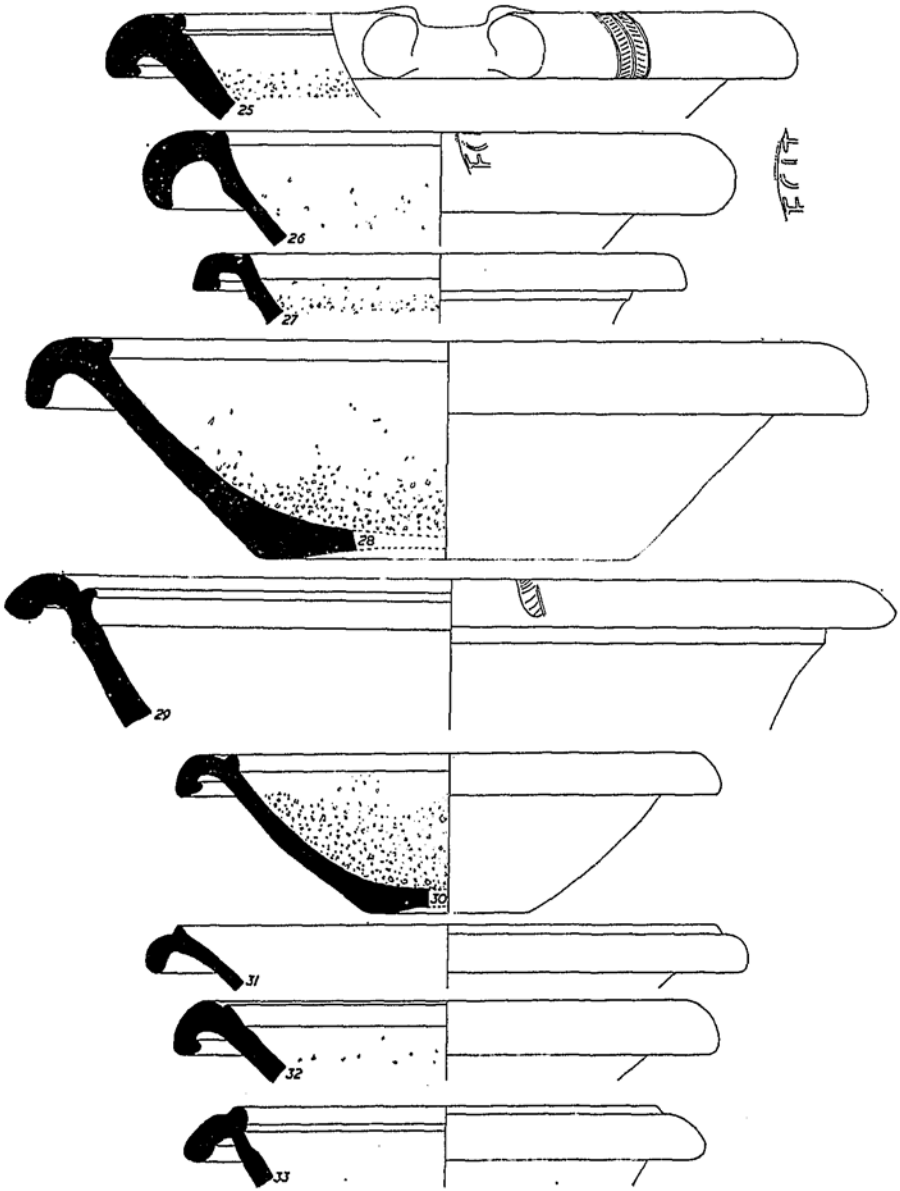


FIG. 11. Mortaria (1/4).

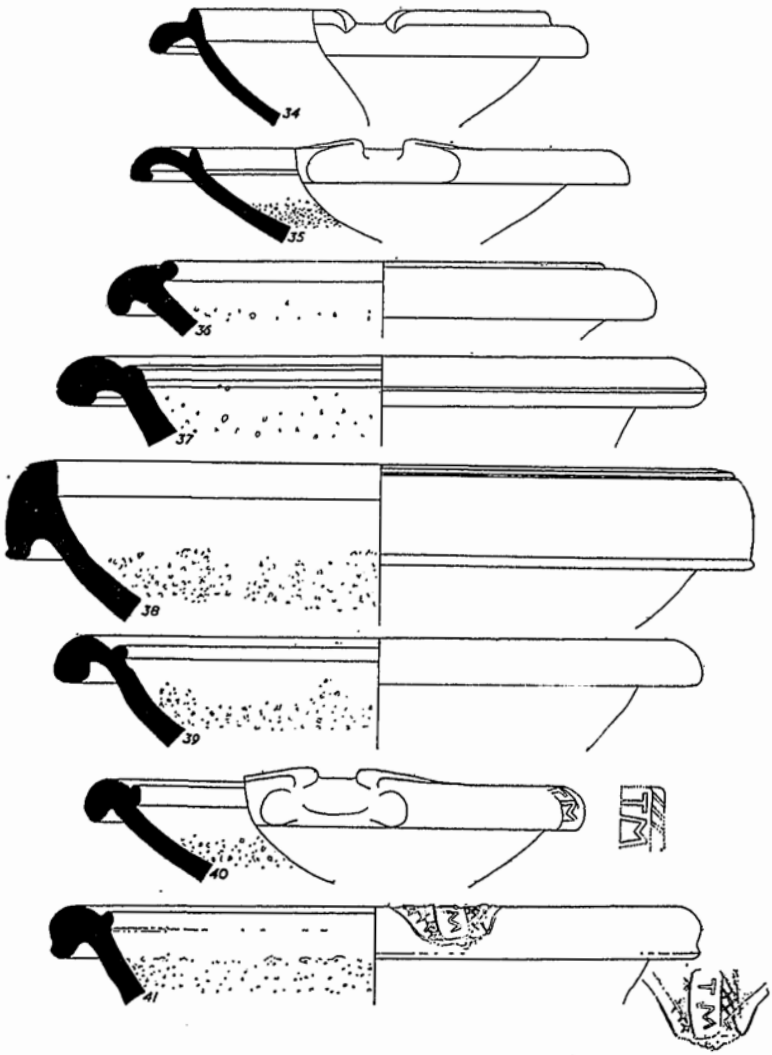


FIG. 12. Mortaria ($\frac{1}{4}$).

33. Greyish cream fabric with white flint grit. Kent or Colchester *c.* A.D. 100–150.

34. In fairly smooth, fine-textured brownish cream fabric; there are no trituration grits and may never have been any. It was made in Kent or Colchester after *c.* A.D. 160.

35. Drab, greenish cream fabric with white and grey flint trituration grit. Made in Kent or at Colchester *c.* A.D. 100–150.

36. Cream fabric; no grits on this piece. Origin uncertain but Kent is most probable. Probably second century.

37. Yellowish cream fabric; greyish and transparent grits. Kent or Colchester, *c.* A.D. 100–150.

38. In soft, fine-textured, yellowish cream fabric with black and white flint grits. Colchester or Kent. Probably late-second or early-third century in date.

39. Cream fabric with thick brownish core; flint trituration grit. Made in Kent or at Colchester; perhaps before A.D. 150.

40. In fine textured cream fabric; there has never been much trituration grit but a very few transparent, white and grey grits can be seen. There is an incomplete stamp of a potter whose stamps read TMH, when complete. These letters presumably represent *tria nomina*. He used two differing fabrics which point to activity at (i) Colchester or just possibly Kent (Fabric A), and (ii) potteries in the Verulamium region (Fabric B), this example being in Fabric A. Stamps on these fabrics are *now* recorded as follows:

A. Colchester (2); Rochester (2); Verulamium.
B. London (2); Verulamium (4); West Wickham (Fox Hill), Kent.

One stamp from Colchester was in a deposit containing Flavian and very early second-century material (*Trans. Essex A.S.*, 3rd series, 1, p. 16, no. 7), and one from Verulamium was in a deposit dated A.D. 115–130. (S. S. Frere, *Verulamium*, I, p. 379, no. 39.) He would best fit a date of *c.* A.D. 110–145. It is highly probable that his activity at Colchester was the earlier.

41. In fine-textured cream fabric with grey and white flint, red-brown, and transparent grit. The incomplete stamp is from the same die as no. 40.

### (iii) *Samian Ware* (Fig. 13)

By A. P. Detsicas, M.A., F.S.A.

As in the case of the coarse pottery, the majority of the samian ware derived either from pits or disturbed layers, with a few sherds securely stratified in their appropriate contexts. The largest proportion of the sherds was of Central Gaulish origin, with South Gaulish factories represented by a larger number of sherds than East Gaulish ware.

(a) *Plain forms.* The assemblage comprised most of the forms of plain samian current in the late first century A.D. and continuing to the close of the second century; it included the following stamped vessels: (i) PEC( ), with the first two letters ligatured and the P

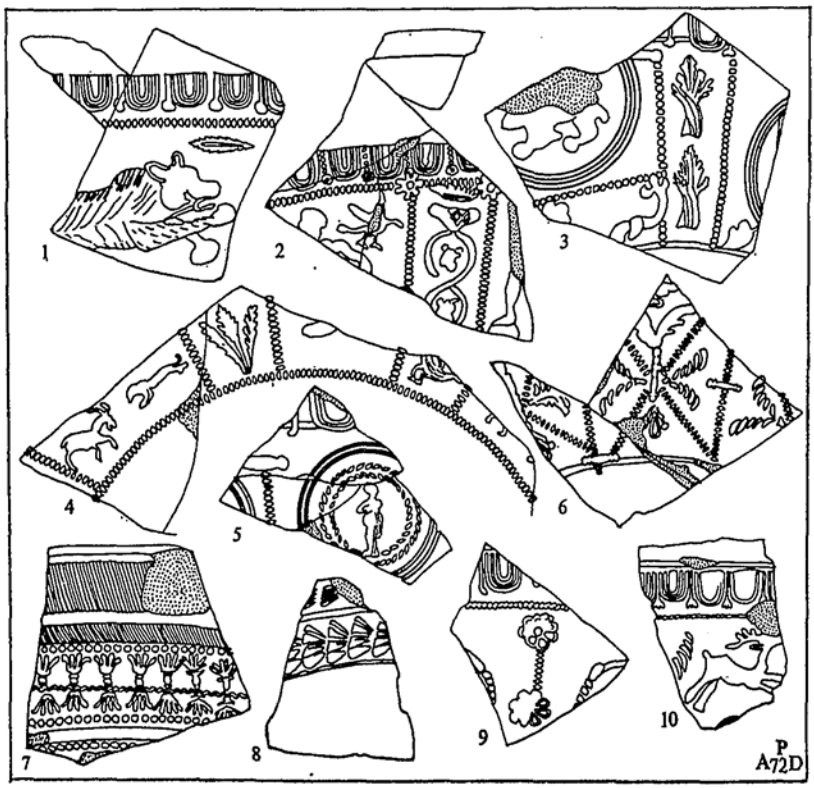


FIG. 13. Samian Ware (½).

facing backward, the stamp of the potter PECVLIARIS, on Form 33; (ii) SECVN( ) on Form 33, of the Central Gaulish potter SECVNDINVS; (iii) MAMMI, on Form 33, of the Central Gaulish potter MAMMIVS, working in the Antonine period; (iv) SVOBN̂EDOF, of SVOBNEDVS, on Form 33; (v) ( )BRILLVS, on Form 33, of the potter GABRILLVS; and (vi) MATERN̂IN, of the late-Antonine potter MATERNINVS, on Form 33.

(b) *Decorated forms*. The decorated vessels were exclusively of Forms 29 or 37; Form 30 was entirely absent. The greatest number of them were too fragmentary to require illustration or were represented by remnants of ovolos alone.

1. Form 37. Central Gaulish, in the style of SACER, with his ovolo no. 4 (J. A. Stanfield and Grace Simpson, *Central Gaulish Potters*, Oxford, 1958, fig. 22, p. 163; hereafter abbreviated to *CGP*), over a

bead-row border and one poorly-impressed figure-type, Bear to right (D.808 = O.1588). Date: *c.* A.D. 125–150.

2. Form 37. Central Gaulish, in very poor condition and making positive attribution to the style of any potter almost impossible. The one certain figure-type, Bird to right (D.1038 = O.2315), was used by BVTRIO, CINNAMVS and PAVLLVS.

3. Form 37. Central Gaulish, in the style of CINNAMVS (*CGP*, fig. 47, p. 267); his detail no 5, impressed twice in a narrow panel, and two certain figure-types, Hare to left (D.950A = O.2116), as on a signed sherd from Corbridge (*CGP*, pl. 158/16), and Marine Monster to left (D.29 = O.42), as on a signed sherd from London (*CGP*, pl. 157/4). Date: *c.* A.D. 140–190.

4 and 5. Form 37. Central Gaulish, in the style of PVGNVS (*CGP*, fig. 45, p. 259). Several sherds from this bowl were recovered and show a decoration of panels and medallions, divided by bead-row borders. No. 4 shows his detail no. 6, and three figure-types, from left to right: Goat (D.889 = O.1836), Lion to left (O.1474), and Bird to right (similar but smaller than D.1001 = O.2197); no. 5 shows this potter's ovolo no. 3, over the usual guide-line and, within a double medallion, a wreath of lozenge-shaped beads containing a small figure-type.

6. Form 37. Central Gaulish, in the style of DOCILIS/DOCCALVS (*CGP*, fig. 24, p. 176), with his details no. 17 and no. 5, forming panels with a St. Andrew's Cross arrangement. Date: *c.* A.D. 130–150.

7. Form 29. South Gaulish, probably in the style of CELADVS (R. Knorr, *Töpfer und Fabriken verzierter Terra-Sigillata des ersten Jahrhunderts*, Stuttgart, 1919, Textbild 5 and Taf. 21B, no. 5; C. F. C. Hawkes and M. R. Hull, *Camulodunum*, Oxford, 1947, pl. XXXIII, nos. 12, 13a and 13b). Neronian.

8. Form 29. South Gaulish, in the style of SABINVS (cf. *Knorr 1919*, Taf. 69, no. 16). Flavian.

9. Form 37. Central Gaulish, with a remnant of the 'bent-tongue' ovolo (cf. *CGP*, p. 199 and pl. 109). Second century A.D.

10. Form 37, probably South Gaulish, with a blurred ovolo whose tongue ends in a trifid projection reminiscent of several ovolos in use by South Gaulish potters; the figure-type is badly squashed but looks very close to Deer to right (O.1734) used in the South Gaulish factories.

Sherds were also found with remnants of ovolos of the following Central Gaulish potters: Potter X-2 (*CGP*, fig. 3, p. 7) or QVINTILIANVS (*CGP*, fig. 17, p. 145) as a remnant of a wavy-line border below the ovolo excludes DRVSVS I who also used it; LAXTVCISSA or CENSORINVS; SERVVS II (*CGP*, fig. 39, p. 230).

## II. Medieval (Figs. 14–19)

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

The medieval pottery from the site is here figured and described in twelve groups according to the archæological contexts in which it was discovered. Evidence of association must not be pressed too far, however, for there is undoubtedly a proportion of rubbish-survivals in some groups and the contents of a particular pit or layer cannot be accepted uncritically as necessarily representing an instantaneous sample of the wares and forms in use when the pit was filled. This is emphasized by the large quantity of Romano-British rubbish-survivals occurring at Rochester in almost every medieval pit or other context.

By comparison with material from Kentish sites previously published, such as Canterbury,[24] Dover,[25] Eynsford,[26] and Strood,[27] it appears that this Rochester pottery covers the twelfth and thirteenth centuries. This is without prejudice to the possibility that a number of simple forms might be earlier survivals, though I can see nothing obviously pre-Conquest, nor, on the other hand, necessarily later than *c.* 1300.

Cooking-pots predominate—mostly in grey ware containing varying proportions of crushed shell, the surface of the vessel often being fired, or burnt in use, to reddish-brown. Unless otherwise stated the term 'grey ware' is used here to describe the colour of the fabric in the fracture, whereas the surface of a particular vessel may be uneven, ranging from red-brown to black. Sandy wares occur in association but form only a relatively small proportion of the assemblage. Rim-forms appear to develop—as elsewhere—from plain everted types, persisting through the twelfth century, as exemplified at Dover, with development of the beaded lip. In the thirteenth century this becomes increasingly pronounced, culminating in the wide, flat-topped flange characteristic of *c.* 1300.

Spouted pitchers and jugs are rare in comparison and there is a complete lack of recognizable foreign imports—a surprising deficiency when one considers that not only was Rochester well situated as a port on the navigable reaches of the Medway but it also lies on the direct course of the main highway existing from Roman times between Dover and London.

[24] *Arch. Cant.*, lxviii (1954), 131–4.
[25] *J.B.A.A.*, xxx (1967), 110–18.
[26] *Arch. Cant.*, lxxxvi (1971), 149 ff.
[27] *Arch. Journ.*, cxxii (1966), 126–9.

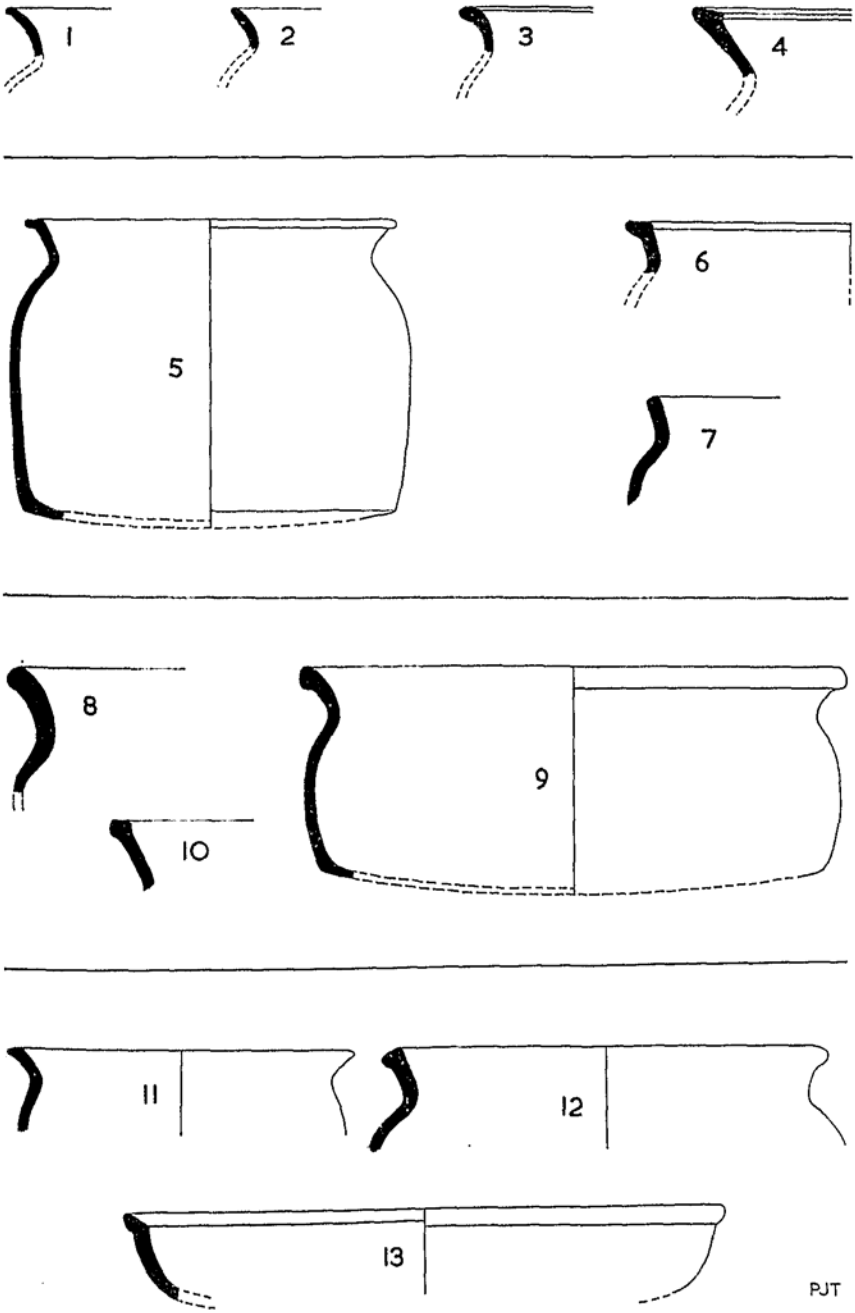


Fig.. 14. Medieval Pottery. Groups I, II, III and IV (¼)

GROUP I. Associated with Kiln A. This group bears comparison in forms with material from Canterbury, provisionally dated 1100–1150 (*Arch. Cant.*, lxviii (1954), 131 and 132, fig. 17).

1. Rim, probably of globular cooking pot. Cf. a vessel from Castle Street, Canterbury, figured in *Med. Arch.*, iii (1959), 32, no. 1. Hard sandy grey ware.

2. Similar to the last but darker in colour.

3. Same ware as 1 and 2, with the addition of a very slight amount of shell.

4. Sandy ware with small amount of shell. Grey, burnt to reddish-brown outside.

GROUP II. Associated with Kiln B and probably contemporary with Group I, though no. 6 may be a later intrusion.

5. Cooking pot of grey ware with small amount of shell. Rim

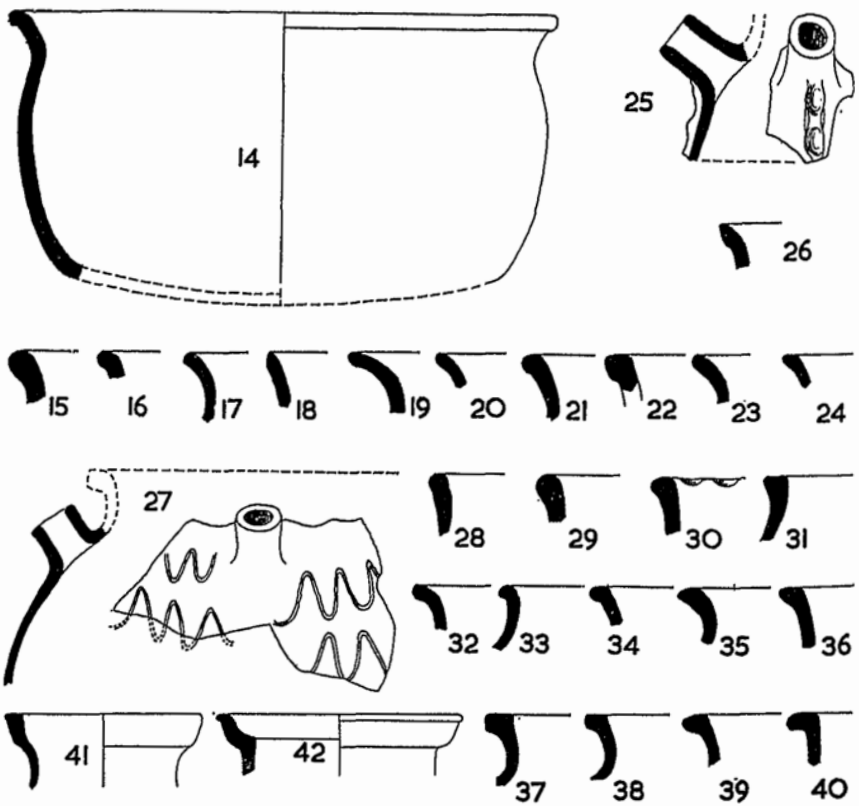


FIG. 15. Medieval Pottery. Group V (¼).

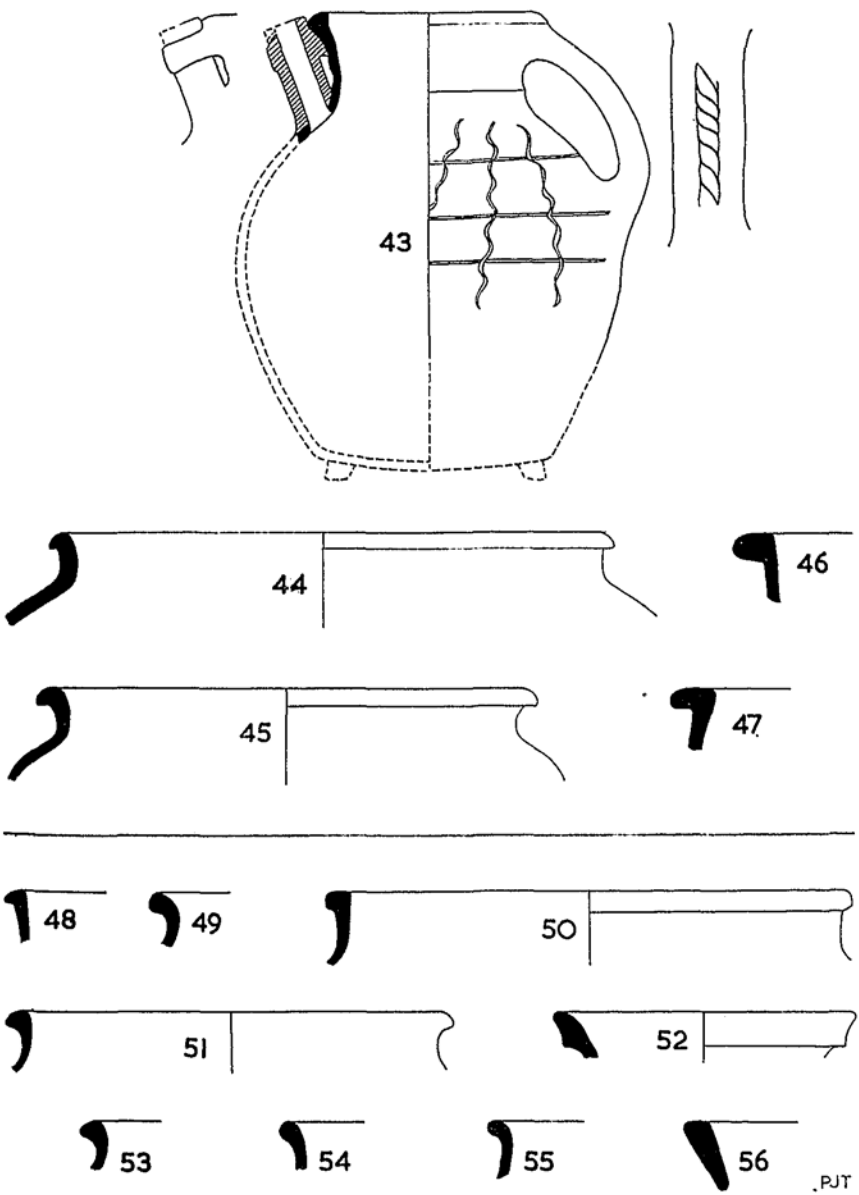


Fig. 16. Medieval Pottery. Groups VI and VII (¼).

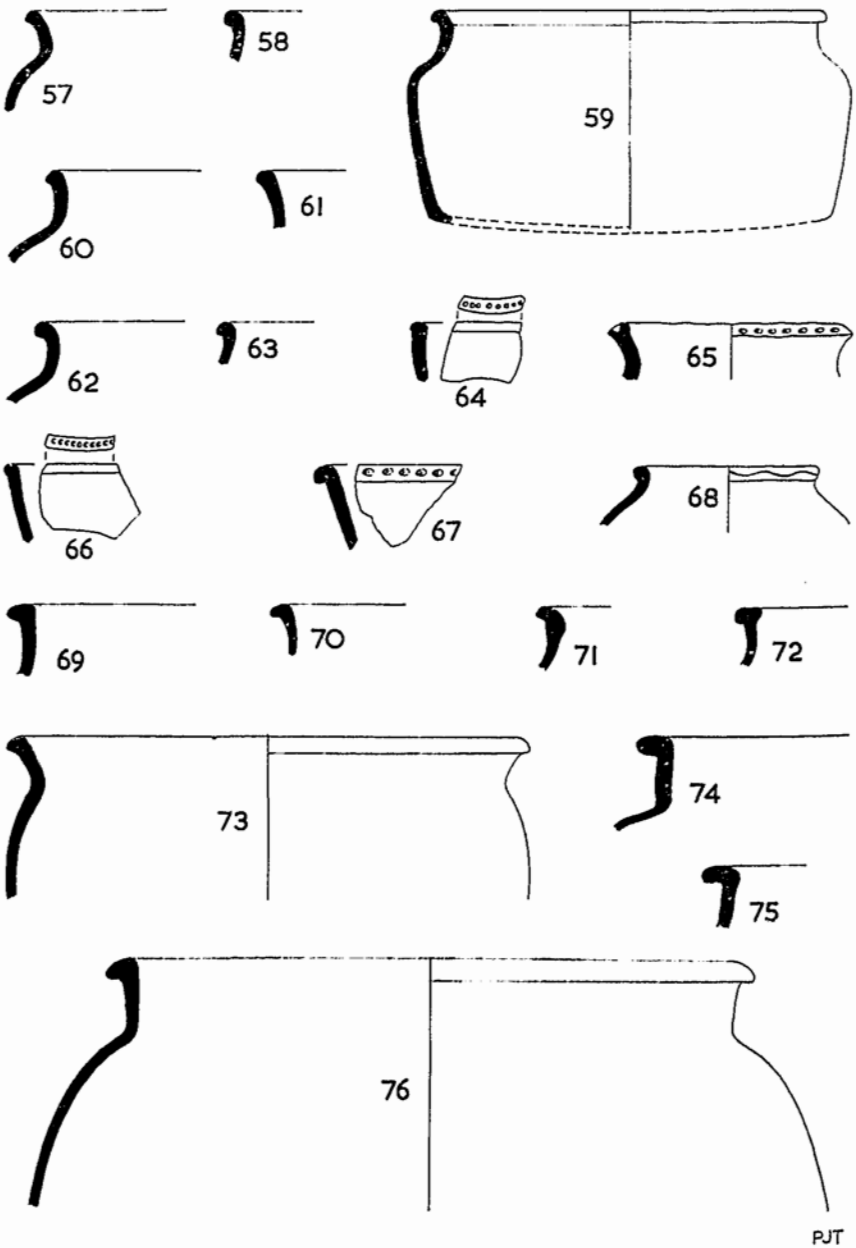


Fig. 17. Medieval Pottery. Group VIII ($\frac{1}{4}$).

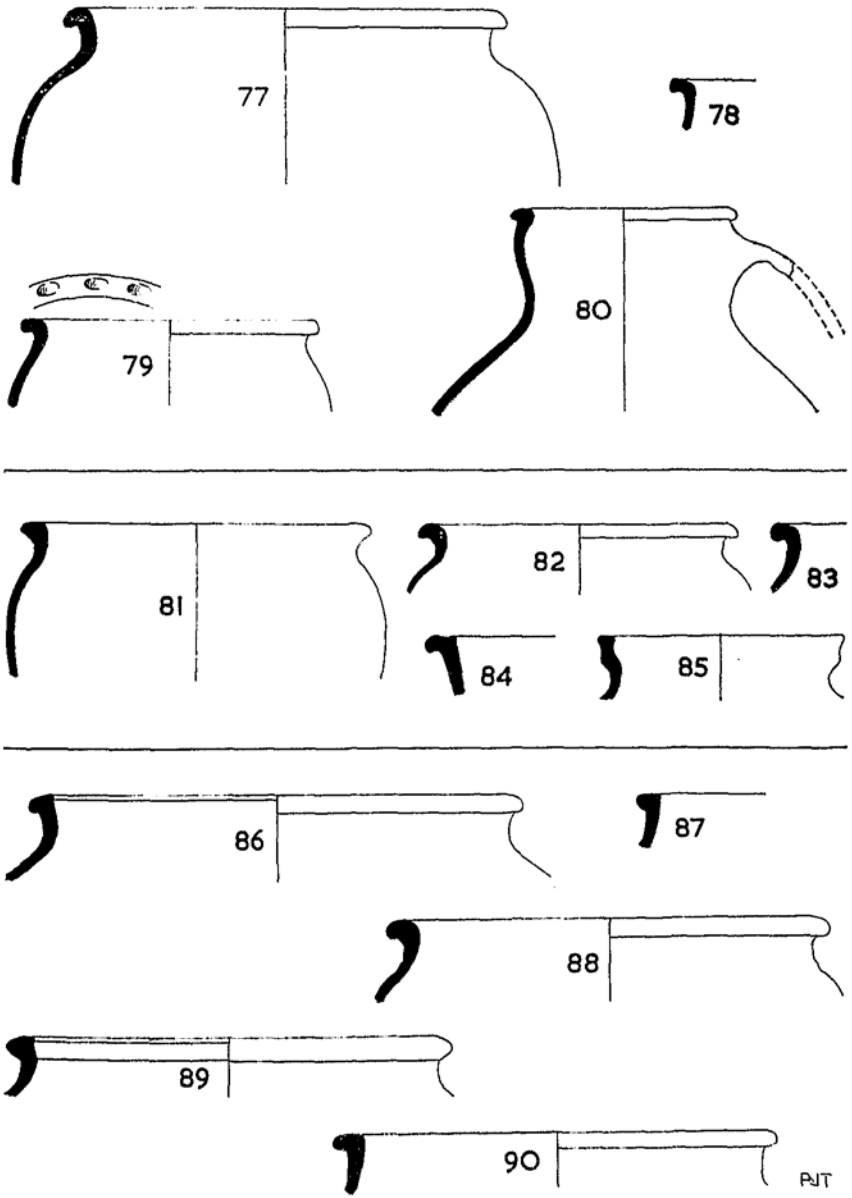


Fig. 18. Medieval Pottery. Groups IX, X and XI (¼).

comparable with *Canterbury*, 1954 (see above), no. 14. Marks of vertical finger-tip smoothing on shoulder.

6. Hard grey sandy ware, fired to brown on surface.

7. Grey ware, heavily filled with finely crushed shell. Brownish on outer face. Probably to be equated with Mr. Rigold's early shelly wares of *c.* 1100 from Eynsford/Lullingstone area (*Arch. Cant.*, lxxxvi (1971), 151, fig. 12, especially L7).

Group III. Pit M3. Rim-forms and ware indicate a twelfth-century date.

8. Heavy plain rim with particles of coarse shell. Grey, reddish on outer face.

9. Shallow cooking pot of grey ware with considerable content of fine shell.

10. Grey sandy ware with no shell.

Group IV. Pit M5.

11. Same class of vessel as no. 1 above. Dark grey ware with coarse shell.

12–13. Identical wares: grey, fired to reddish on surface. Much coarse shell. Possibly in same class as the Eynsford Castle twelfth-century Phase X(c) ware (*Arch. Cant.*, lxxxvi (1971), 150).

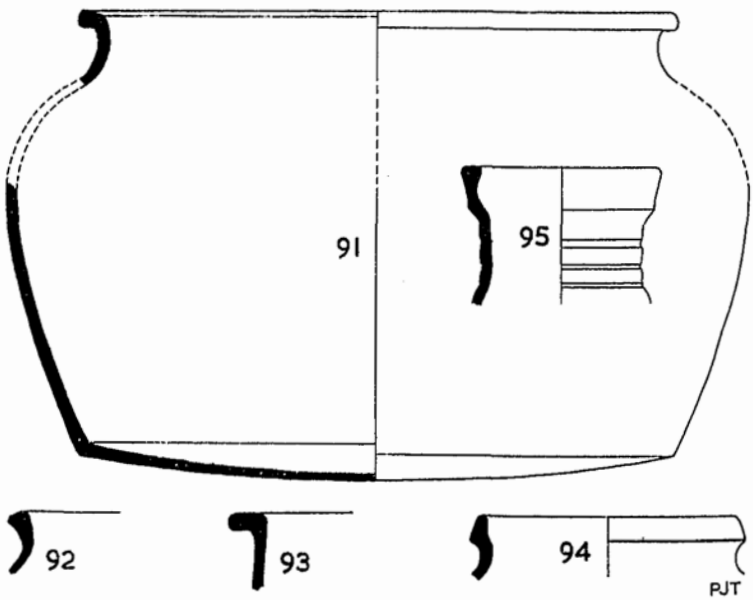


Fig. 19. Medieval Pottery, Group XII (¼).

GROUP V. Pit M1. The material can be separated into stratified divisions:

(a) 14–17, from lowest part of filling.
(b) 18–24, main filling.
(c) 25–26, upper filling.
(d) 27–42, stratum covering and extending beyond pit.

14–40. Grey shelly wares, except 34 which is sandy, and 25. Mostly simple rims of twelfth-century type but 37 and 38 are matched by thirteenth-century forms at Eynsford. No. 25 is a spouted pitcher, dark grey, with vertical impressed strip on body and under spout. This decoration occurs on a twelfth-century imported pitcher of quite different ware from Lime Street, London, figured in *Med. Arch.*, iii (1959), 62. No. 27 is another spouted pitcher of rather shelly grey ware with orange surface decorated with scored undulating lines.

41–42. Necks of unglazed jugs in grey sandy ware.

GROUP VI. From a stratum observed to dip into the 1225 ditch.

43. Spouted pitcher of reddish-buff ware, with thin uneven yellow glaze. Top of spout linked to rim by encircling band. Handle decorated with twisted strip. Body encircled by girth-grooves and ornamented with vertical wavy ribbons. Restoration of tripod base is conjectural. This type of vessel is well represented in the Oxford region and at Southampton, but is rare in Kent. A twelfth-century type but in this instance evidently surviving into the early part of the century following. Cf. *Antiq. Journ.*, xxxix (1959), 261, fig. 17; *Arch. Cant.*, lxxvi (1961), 46–7.

44–47. Grey ware fired to reddish-brown on surface, with fine shell. No. 46 has wavy line scored round top of flange.

GROUP VII. Pit M6. Probably first half of thirteenth century. The necks of the cooking pots tend to be set back, rather than everted as typical of the twelfth century.

48–56. Grey ware, more or less shelly, except 54 which is sandy. No. 52 appears to be the neck of a large jug, and is sandy with very little shell.

GROUP VIII. Pit M2.

57–76. An apparent overlapping of simple twelfth-century type rim-forms with more developed examples characteristic of the thirteenth. Stabbing round the rim occurs (though not exclusively) in the twelfth century, while forms similar to 72, 74 and 76 appear *c.* 1200–1250 at Strood and Eynsford (*Arch. Journ.*, cxxii (196), 1266). All grey wares with varying degrees of shell filling, except 65 which is

grey sandy—probably the neck of a pitcher. No. 68 has undulating edge to rim and a reddish surface.

GROUP IX. Pit M11. Probably first half of thirteenth century.

77–79. All grey fabric with some shell.

80. Unglazed jug of reddish ware with slight admixture of shell. Strap handle with central row of round stabbings. Very slight lip formed by finger-tip depression inside rim opposite handle—not shown in drawing.

GROUP X. Pit M8. Thirteenth century.

81–84. Grey ware with shell.

85. Neck of unglazed grey-ware jug.

GROUP XI. Pit M12. Thirteenth century.

86–90. Grey ware, usually fired to brown surface, with some shell.

GROUP XII. Pit M7, cut by wall of south tower of East Gate.

91. Fully developed thirteenth-century form of cooking-pot, in grey ware with shell. Cf. Canterbury, Group IV, *Arch. Cant.*, lxviii (1954), 133 and 134, dated second half of thirteenth century.

92. Grey, shelly. Perhaps a survival.

93. Hard grey ware with no shell.

94. Grey ware with small amount of fine shell. Probably a jug.

95. Jug of grey ware with orange slip and uneven greenish glaze.

## II. BROOCHES (Fig. 20)

By M. R. HULL, M.A., F.S.A.

1. This, typologically, is probably the earliest of this small collection of brooches. It is a one-piece brooch with tightly wound spring of four turns; the leg of the bow appears to have been round in section, but above the button it is slightly wider and flattened, forming a very short head which turns through a sharp angle directly into the spring. The buttom consists of three transverse ridges.

When the button is close to the head, as here, there is a possibility of connection with the Aylesford type, but in its developed form (at least) that type has a head which expands against the spring, in more or less trumpet-form, and one of the ridges of the button is usually shaped as a small horn.

Our brooch belongs to a small series of smallish, light brooches, with unexpanded head and bow of (usually) round section, with the

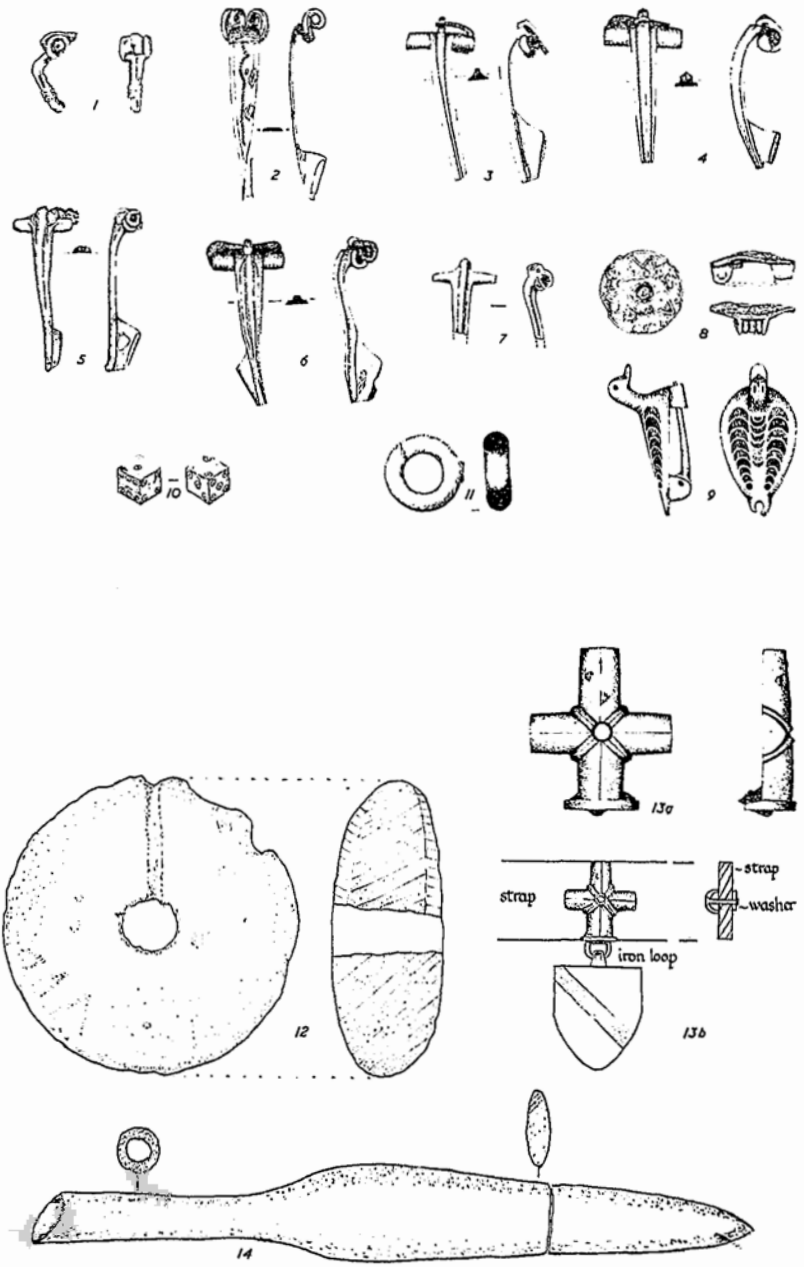


FIG. 20. Brooches ($\frac{1}{2}$); nos. 10, 11, 13 ($\frac{1}{2}$); nos. 12, 14 ($\frac{1}{4}$).

button either full-round, or developed in the front only. The following are illustrated in my forthcoming conspectus of brooches:

0248. Colchester. Head only; the bow is of little more than round wire; button of two ridges.

0249. Colchester. Bow only, of round wire, with button of two ridges. This is set nearly half an inch below the angle of the head, but is still above the middle of the bow.

These two brooches both come from the top of the hill on the site of Camulodunum, where there had been much erosion; they were not stratified.

2826. Upper Deal. Complete brooch like no. 0248; the bow is straight and continues to a triangular catchplate perforated with four round holes in a row. *Swarling*, pl. xv, 16d.

7076. Icklingham. 1865. Ashmolean Museum. As last, but button of three ridges; bow straight, short; catchplate flat, with one round hole. As the bow joins the foot there are two slight transverse grooves on it, and the front edge of the catchplate is crenate, a feature which also occurs in the Glastonbury type. (Meare, East Village, Gray, pl. xlv, nos. 11 and 14.)

6333. South Ferriby. Hull Museum. The bow is not thickened in front view, but the head is thickened in side-view; the button has five ridges, three are right on the angle of the head, and two a little lower. The foot is missing.

5856. Cirencester. Corinium Museum. B.437. Similar to last, but button of four ridges, the upper and lower of triangular shape, almost like small horns. Catchplate solid.

9207. Ancaster. Similar, but bow of flat, oval section, and button of two ridges on front only. Catchplate solid.

More substantial are the following:

6476. Guilden Morden. Cambridge University Museum. A large brooch, with button of three ridges, on front only; the bow runs into the catchplate with a slight reverse curve, and the foot is an open frame like the true Nauheim brooch. *V.C.H. Cambs.*, i, 292, fig. 26, 5.

2241. Thirst House Cave. A short, very stout brooch, with button of four very large ridges; catchplate solid, triangular.

8594. Canterbury. Royal Museum. Another short, stout brooch, the bow very straight, round, with button of four very shallowly moulded ridges; catchplate solid.

It will be seen that there is a considerable similarity running through this series, which is standing somewhere between the 'La Tène III brooch' and the Aylesford type. Though there is little evidence for dating in the above list what there is is all for a date early in the first century A.D. The two from Upper Deal and

Guilden Morden might even be earlier. The association with the east side of the country is noticeable.

2. A Nauheim derivative brooch of yellowish metal with a leaf-shaped bow. The thin bow is decorated in the same pattern as that on a similar brooch from the Eccles villa (my no. 9581), except that, in this case, the punched wavy line seems to have been made with a single, round-nosed punch.

This brooch must be pre-Flavian. The three brooches (nos. 2273, 9581 and this, 9616), must be from the same workshop.

The next few brooches are of types which follow upon the Colchester type, but are made in two-pieces.

3. A typical example of my Type 92, with short crest imitating the hook of the Colchester type, and bow with a (usually) flat-topped central ridge between two cavetto flutings. Spring of eight turns; the rib on the bow is obliquely hatched; there may have been an attempt to pierce the catchplate. Date, Claudian to early Flavian.

4. A similar brooch, but the bow is a variant in which the rib on the bow is a half-round moulding and the crest is suppressed. I can quote the following parallels:

2004. St. Albans. *Verulamium*. Brooch no. 24. Found with coins up to A.D. 71.
1845. *Richborough V*, no. 20 (and I think also 1846, *ibid.*, no. 21, which is very obscure).
1703. *Richborough I*, no. 3, again in poor state.
5904. Franks Hall, Farningham. Found with first-century pottery.
0140. Colchester. Colchester Museum.
2706. London. London Museum. *London in Roman Times*, fig. 27, 20.
1702. *Richborough I*, no. 2.
4308. Canterbury. Royal Museum.

5. A small example of my Type 93A. The spring of eight turns is damaged; the short crest is made by two crude notches cut with a file (this is typical of Type 93). A deep groove extends two-thirds of the bow, and this is usually cross-hatched, though not in this case. The slender bow ends in a slight double knob; round hole in catchplate.

There are many parallels in Kent, Essex, St. Albans and East Anglia, some dated to Flavian levels or later, but these later examples are probably survivals, for the type does not occur north of Leicester, and was probably out of use by the time of the Roman advance into Yorkshire.

6. This also is of my Type 93, but of group C, in which the crest is continuous with a rib which may run only part-way down the bow, or

all the way down. The bow itself is flat, apart from the rib. Otherwise the details are as in 93A and B, as are the distribution and date.

7. The head only of a similar brooch with short crest and smooth bow, with neither groove nor rib. This is my Type 93B, and the same remarks apply as to the last two brooches.

8. A small disc-brooch, very corroded. There is a central pit from which a stud has been lost. The pattern is that of my Type 252C, in which the main field is enamelled, with a central stud (usually conical), in the field is a circle of bronze spots and a scalloped circle of bronze with V- or U-shaped scallops. Part of this circle is preserved on ours, and traces of blue enamel outside it; the enamel inside has perished, it usually differed in colour from that outside.

The type is not at all numerous, and while chiefly found in the south of England, actually extends as far north as Newstead. It is not yet dated, but should be second century.

9. Brooch in the form of a duck. This is my Type 213A. It is quite rare, so that a full description of it and of the few parallels is perhaps justified.

The body is well-modelled and hollowed beneath, as shown in the figure; the eyes retain enamel, but I am not sure of the colour; the wings are shown as alternate red and blue crescents, and in these the blue has a thin margin of white, apparently intentionally done, though I cannot say how. The band down the back has a series of small crescents which are very difficult to discern, but were perhaps again alternately red and blue. The pin is hinged and the tail was pierced to attach a chain.

The parallels are:

8508. Springhead. Gravesend Museum, with acknowledgements to Mr. E. W. Tilley. A brooch as nearly as possible identical with ours.

4063. Saltersford. Grantham Museum. Report 1922–3, fig. 4. I have this noted as similar to no. 8508, but the enamel red and green. I have not seen this nor have I been able to check the reference.

4060. Brettenham. Ashmolean Museum. 1927. 382. The general design is the same as ours, but the wings are of blue and green crescents, and the band down the back is a lattice-pattern with green enamel. (This is how I have drawn it, but after the difficulty of discerning the content of the strip on the back of our brooch I would not be surprised to learn that I have misapprehended it in this case, and my 'green' may well have been red.)

4064. York. Yorkshire Museum. Similar to no. 4060, the lattice seems to retain traces of red enamel.

4554. Chester. Chester Museum. Of the same general pattern as

nos. 4060 and 4064, but the band down the back is blank. Enamel red and blue. The bronze of this brooch has turned a chalky white.

6026. Housesteads. Newcastle University Museum, *P.S.A.N.*, 4th series, i (1925), 52. Like nos. 4060 and 4064.

The only evidence here for dating is that no. 6026 could not have been deposited before about A.D. 120. So far as I know the type is British and has not been found on the Continent.

The four-figure numbers used above, and references to type-numbers, are the catalogue-numbers and type-numbers used in my conspectus of ancient British brooches, which exists at present as two copies in typescript, one of which is deposited with the Society of Antiquaries at Burlington House. Publication is in preparation.

## III. Other Finds (Fig. 20)

### (i) Romano-British

Small finds were not particularly numerous and only two are thought worth illustrating.

(a) Bone die with numbers one to six. In every respect except size similar to the one illustrated in *Richborough I*[28] (fig. 20, no. 10).

(b) Bead in transparent green glass. Cf. *Richborough IV*,[28] pl. lv, 235 (fig. 20, no. 11).

(c) Melon-bead in blue glass paste, cf. *Richborough IV*,[28] pl. lv, 240.

(d) Three complete plain bone pins, one dyed green to imitate bronze.

(e) A bronze pin with plain knob.

(f) Bronze finger-ring, with traces of red enamel in the bezel; very similar to a bronze finger-ring from Nor'nour (*Arch. Journ.*, cxxiv (1967), fig. 8, no. 6.

(g) Two pairs of bronze tweezers.

(h) Piece of polished red and white marble $1\frac{3}{4}$ in. $\times$ $1\frac{1}{4}$ in. chamfered on two sides. Probably part of a palette. Cf. *London in Roman Times*, London, 1946, p. 82, fig. 20(i).

### (ii) Medieval

(a) Loom-weights (Pl. I and Fig. 20, no. 12). The vertical or warp-weighted loom was used from the earliest times and weights intended for use with it have been found in Britain from the Bronze Age onwards.

[28] J. P. Bushe-Fox, *Excavations at the Roman Fort at Richborough, Kent*, I–IV, Oxford, 1926–49.

It has survived in remote areas of Scandinavia to this day and there are excellent illustrations of one in operation on pages 46 and 47 of Marta Hoffmann's 'The Warp-weighted Loom'.[29] It seems to have continued in common use until the early medieval period when the horizontal loom with treadles generally took its place. (There is a representation of a horizontal loom in a stained-glass window of thirteenth-century date in Chartres Cathedral.[30])

The contents of Kiln A consisted of thirty-three bun-shaped clay weights averaging 3 lb. each, together with 21 lb. of fragments, probably therefore representing an original batch of forty. They averaged $5\frac{3}{4}$ in. in diameter and the central holes were small, with an average diameter of 1 in. Each had a groove running from the central hole to the outer edge to accommodate the looped cord to which the threads were attached. Clay loom-weights have been dated according to the size of the central hole—the annular being the earliest and dating from the seventh century, the intermediate taking its place in the eighth and the bun-shaped coming into use during the ninth.[31] The present discovery, therefore, with its associated pottery (Groups I and II) both confirms the late dating of the bun-shaped type and establishes that it was still in use in Rochester during the first half of the twelfth century.

(b) Equal-armed cross.[32] The cross, which is from Pit M2 and was associated with the pottery of Group VIII, is of iron which had been given a thin coating of bronze and measures $1\frac{1}{2}$ in. $\times$ $1\frac{1}{2}$ in., with a central countersunk hole and a flange at the end of one arm pierced by an iron rivet (Fig. 20, no. 13(a)). While no exact parallel has been found, it has similarities with the cruciform harness fittings used for the attachment of heraldic pendants or bells to the horses' peytrel or to the brow-strap.[33] It is suggested, therefore, that the cross was secured to a strap of equal width by a pin passing through the central hole and secured by a washer at the back of the strap. The projecting flange would thus overlap the edge of the strap and prevent the fitting from rotating. The iron rivet through the flange secured an iron ring (traces of which remain), from which the heraldic pendant or bell was suspended. Fig. 20, no. 13(b) shows how this could have been done.

It seems very probable that the saltire decoration can be referred to St. Andrew's Priory and that the central pin bore a scallop shell to

[29] *Studia Norwegica*, no. 14, Universitetsforlaget, 1964.

[30] P. Brandt, *Schaffende Arbeit u. bildende Kunst*, Leipzig, 1927, I, fig. 441.

[31] C.B.A. Research Report 4, G. C. Dunning, J. G. Hurst, J. N. L. Myres and F. Tischler, *Anglo-Saxon Pottery: A Symposium*, London, 1959, 23–5.

[32] For the suggestions made in this note, I am greatly indebted to Mr. P. J. Tester, F.S.A.

[33] *Medieval Catalogue*, London Museum Catalogues: No. 7, London, 1954, 119, fig. 39.

complete the crest. It is not unreasonable, therefore, to suggest that the Rochester monks, like Chaucer's, had bells upon their harness:

> 'And whan he rood men mighte his brydel heere
> Gynglen in a whistlynge wynd as cleere,
> And eek as loude, as dooth the chapel-belle.'[34]

(c) Iron spearhead (Fig. 20, no. 14). This is from the lowest layer of Pit M1, and is associated with the pottery of Group V (a). A twelfth-century date seems likely, therefore, and this is supported by its similarity to the one shown on pl. xvi, no. 5, in *Medieval Catalogue*, H.M.S.O. London, 1954, which is ascribed to 'the earlier Middle Ages'.

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[34] Chaucer, *The Prologue to the Canterbury Tales*, ll, 169–71.