XI.—THE FORT ON HADRIAN'S WALL AT HALTON.

By F. G. Simpson and I. A. Richmond.

[Read on 31st March 1937.]

List of abbreviations used:

AA^{1-4}	*Archæologia Aeliana*, first-fourth series.
CW^{2}	*Transactions* of the Cumberland and Westmorland Antiquarian and Archæological Society, new series.
C	*Corpus Inscriptionum Latinarum*, vol. VII.
JRS	*Journal of Roman Studies.*
NCH	*A History of Northumberland*, County History Committee, vols. I-XIV.
ORL	*Obergermanisch-Raetische limes*, Lieferungen 1-54.
PSAN	*Proceedings* of the Society of Antiquaries of Newcastle upon Tyne.

INTRODUCTION.

The Roman fort at Halton, the fifth from the east end of Hadrian's Wall, lies 15½ miles west of Newcastle. It had always been regarded as unlikely to be affected by modern developments, since it lies in the rich agricultural property of Sir Hugh Blackett, Bart. It is, however, traversed by two roadways, the east-to-west military road from Newcastle to Carlisle, which is almost coincident with the fort's *via principalis*, and a southward lane to Halton, running west of the *via decumana*, through "Chesters close" field.[1] In 1935, the Northumberland county surveyor, Mr. Alexander Cheyne, informed the North of

[1] *NCH* x, 388, map.

England Excavation Committee that the reconstruction of the Newcastle-Carlisle road, including a cutting to relieve the steep descent to the stream west of the fort, would entail the sacrifice of a considerable area on both sides of the road. Permission to examine the area in question was readily accorded by Sir Hugh Blackett, the owner of the land, and by the Northumberland County Council, the owners of the road. Preliminary work, undertaken by the writers for the North of England Excavation Committee in the autumn of 1935, soon showed that the task would be a heavy one. The North of England Excavation Committee therefore approached the Durham University Excavation Committee with a view to sharing expenses and supervision; and the excavations of 1936, the joint work of these committees, are the result of the action then taken. It must be borne in mind that the work of 1936 is itself preliminary to extended operations when the reconstruction of the road takes place.

The plan of operations was determined by the preliminary work of 1935, which had sought[2] to explain (fig. 1) the peculiar planning of the fort. As at five[3] other Wall-forts, the *praetentura* of Halton projects beyond the line of the great Wall: but there is also a quite exceptional westward projection, occurring behind the line of the Wall only, and giving to the fort the shape of a rectangle of which the top left-hand third was missing. Preliminary trial-trenching soon showed that the westward projection was an extension of a fort originally 409 feet wide over its east and west ramparts. The north-west angle-tower of the extension had been built against the great Wall, when the latter was already much weathered and visibly leaning northwards; and, although the tower's floor had been removed, the clay packing below it yielded third-

[2] *PSAN*[4] vii, 132-4.

[3] Benwell, *AA*[4] iv, 137 and pl. xxiii; Rudchester, *CW*[2] ii, 391-2, *AA*[4] i, 120 and pl. i; Chesters, *CW*[2] i, 84, 86, pl. ii; Birdoswald, *Handbook to the Roman Wall*, ninth edn., 171, *CW*[2] xxxiv, 128, fig. 3; Burgh-by-sands, *CW*[2] xxiii, 2.

century pottery, showing this extended fortification to have been a late enlargement of the fort, probably made during the great reconstruction after A.D. 297. At the same time,

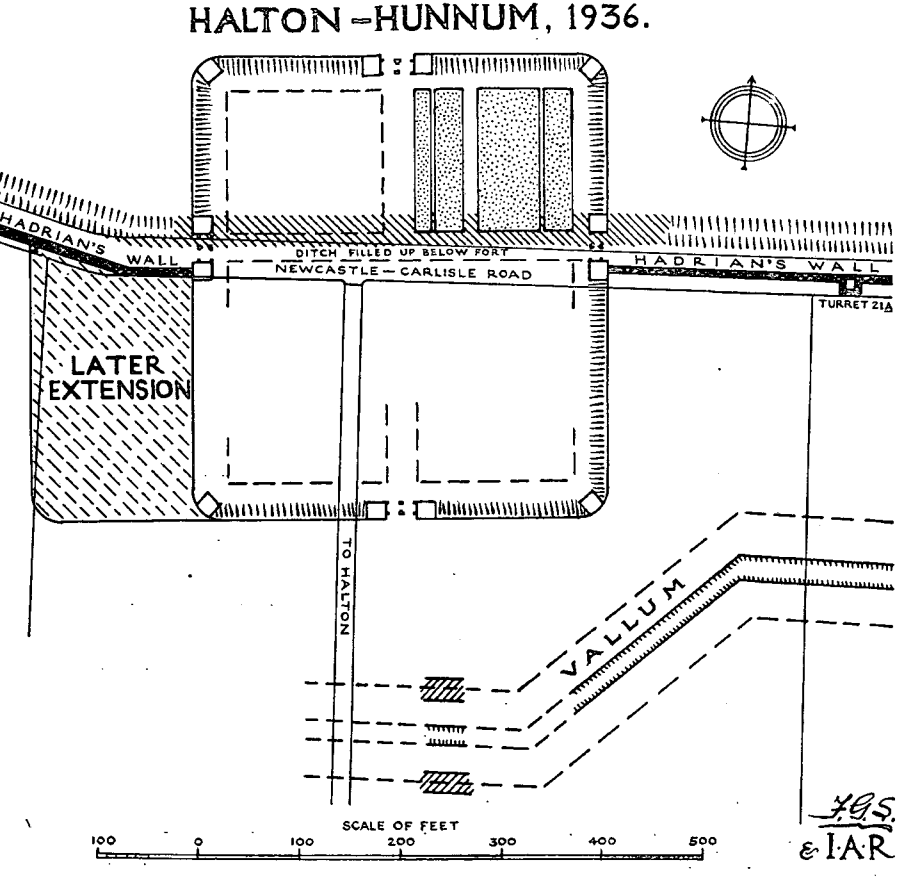

FIG. I.

the main east and west gates, at the end of the *via principalis*, were located. They were of normal type. Their southern halves are at present almost entirely covered by the modern road. At the west gate the foundations of the north tower, as will later appear in detail, were found

to lie so much deeper than those of the central piers, as to suggest that at Halton, as at Birdoswald[4] and Chesters,[5] the ditch of the great Wall had originally run across the site, the fort being a secondary structure extending over the filled-up ditch. The first operations of 1936 were therefore directed to examining the northern halves of the gates in the north verge of the modern road and in the field to north. This field[6] has had many names. When ploughed, it was known as the "Brunt-ha'penny field," and previously as "Thorny close" and "Silverhill."

(i) THE MAIN EAST GATE (pl. XXII, 2; fig. 2).

The superstructure of the main east gate had been almost entirely removed by stone-robbers. Only two courses of the north wall, and one of the west wall, of the north tower remained in position. The external masonry of the east wall, doubtless of the same large blocks as remain south of this gate and also at the west gate, had been lifted off a thin levelling-course, still in position. The jambs and sills of the passage-way had been torn out below Roman street-level, isolating the guardchamber's door-sill, distinguished by a pivot-hole and two runways. The site of the inner central pier is occupied by a nineteenth-century[7] pit-shaft, which had wrecked most of the portal. At the outer pier the foundation-blocks remained, exhibiting pivot-holes with runways respectively curved and angular, and setting-out lines for the masonry that once stood above.

Such thorough devastation renders all the more remarkable the remains which the spade presently disclosed. On following the external face of the east wall, a trench quickly revealed (pl. XXII, 2; fig. 2) that this had been carried down in seven courses, each marked by a bold offset, until it rested

[4] Birdoswald, see p. 152, note 3.
[5] Chesters, *CW*[2] i, 84, 86, pl. II.
[6] Bruce, *Roman Wall*, second edn., 127; *NCH* x, 388.
[7] We owe this information to Mr. English, of Stagshawbank colliery. The shafts were in use about 1860.

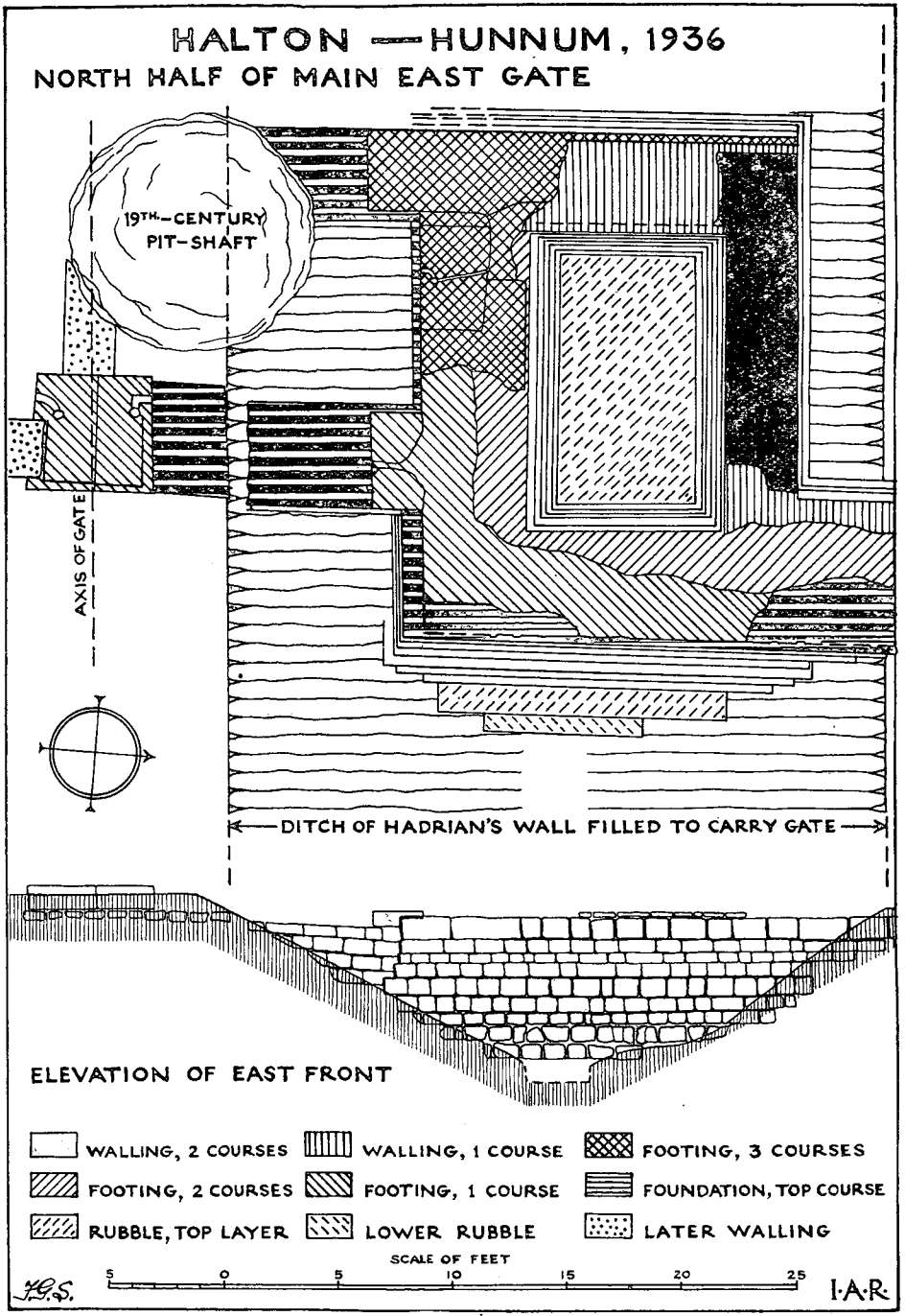
HALTON — HUNNUM, 1936
NORTH HALF OF MAIN EAST GATE
19TH-CENTURY PIT-SHAFT
AXIS OF GATE
DITCH OF HADRIAN'S WALL FILLED TO CARRY GATE
ELEVATION OF EAST FRONT
WALLING, 2 COURSES
WALLING, 1 COURSE
FOOTING, 3 COURSES
FOOTING, 2 COURSES
FOOTING, 1 COURSE
FOUNDATION, TOP COURSE
RUBBLE, TOP LAYER
LOWER RUBBLE
LATER WALLING
SCALE OF FEET
5 0 5 10 15 20 25
I.A.R.

FIG. 2.

upon a massive rubble platform, laid in two layers. Each course was of different length, and the lower three accommodate themselves to the north and south slopes of the ditch of the great Wall, which is dug in the undisturbed subsoil, wherein the end of each course was firmly set. The two layers of the rubble platform, or raft, were similarly treated, and occupied the bottom of the ditch. The upper part of the ditch, however, extends further south than the tower, and the system of coursing described was therefore continued southwards in the four-course foundations of a sleeper-wall carrying the north external jamb and threshold of the north portal. The west wall of the tower had been similarly treated, though not uncovered by us in detail, while the north and south walls were carried down, in three courses of footings, and six of boldly stepped foundation, on to the rubble platform which extended below. So little of the guardchamber floor remained that no hesitation marked the decision to remove completely the clay packing which had once carried it, in order to reveal entirely the character of these foundations. Most of the packing in the portal, however, was left in position, because the pit-shaft already noted must here have broken the slope of the ditch.

There is thus no doubt that the gateway was built on top of the Wall-ditch, and provided with foundations suitable for the contingency. This arrangement has never before been so fully disclosed. Mrs. Hodgson's unpublished drawing of the main east gateway at Birdoswald, now at Tullie House Museum, Carlisle, reveals only the top[8] of similar stepped masonry: while, although the ditch of the great Wall is recorded[9] to lie below Chesters fort, its relation to the main gates across its line has not been studied.

The rest of the gateway is quickly described. The doors had evidently been much used, for the pivot-holes

[8] cf. Mrs. Hodgson's drawing, *CW*[1] xv, 208, pl. 1.
[9] *CW*[2] i, 84-6.

were well worn. But the south portal at least had been blocked in the second period. The north end of the blocking-wall was found at the outer central pier, while the space between this and the inner pier had been closed by walling.[10] Any remains of stratification must lie below the Newcastle-Carlisle road and its north verge.

(ii) THE MAIN WEST GATE (pl. XXII, 1; fig. 3).

The main west gate was also examined for the similar condition. Even less of the superstructure of the north tower remained (pl. XXII, 1) than at the east gate; but the existing remains fall into two categories. Those in the ditch compare closely with the structure already described at the east gate. But the ditch is here descending a slope towards the west, which originally began about the middle of the existing fort. The fort-builders, however, disliked the slope and determined to set their buildings upon a platform, levelled up against the back of their fort-wall and gateway. Thus, between the lip of the ditch and the threshold of the gate, a retaining-wall, six courses high, makes up the difference in level. This is to be carefully distinguished from the normal fort-wall, of which all has been robbed. The same condition demanded that weep-drains should be provided in the foundations, to deal with the water gathered behind the retaining-wall. These were provided below each portal of the gate, the north drain running along the line of the ditch, the south drain curving northwards outside the portal and emerging at the south lip of the ditch. The south drain, and the portal above it, lie unexcavated below the modern road. The north drain is neither well built nor well aligned, and all the masonry associated with it, whilst clearly inserted before any superstructure was built, is hastily erected, as if it were an afterthought on the part of the foundation-builders. Indeed, the sleeper-wall below the threshold

[10] Usually this blocking-wall has a doorway, as at Birdoswald, *CW*² xxxiv, and Rudchester, *AA*⁴ i, pls. II, IV.

appears either to have been left incomplete or to have been deliberately taken down in order to permit the insertion. Nor is this the only evidence of afterthought in the scheme. The central pier of the gate, of which the chamfered plinth and foundation remain, exhibits its pivot-holes and their runways: but the pivot-holes are unworn. The reason for this is immediately apparent upon a further examination of the front of the gate. Blocking-walls still four courses high are visible at both thresholds, and are of one build with the secondary foundation-work. Thus, at the same time as the builders resolved to construct the north weep-drain, they determined that the gate was no longer to be used. No remains of a roadway were found outside the gate.

It is, however, clear that the main archways of the gate were erected. This may be inferred from the existence of the superstructure on the inner central pier and the gap from which stone-robbers have removed such masonry on the outer pier. Doubtless the archways, as in milecastle-gateways, would be among the first parts of the building to be erected. This must also be taken to account for the fact that the dedication-tablet of the gate was in position: for a broken half of the slab (pl. XXIII), exposed to heavy weathering before it fell, was found on the ground, face downwards, in front of the central pier. It had evidently fallen from the haunch above the pier, occupying the same position between the two arches as the sculptured slab once visible on the east gate[11] of Chester. The text, no less interesting than the other features, is given below.

Returning meanwhile to the structure of the gateway, a blocking-wall between the central piers may also be noted. It is three courses high and rests upon a roughly paved surface, but its relation to stratification in the gateway is not clear, since all Roman levels in the north portal have been removed, and the south portal is not yet available for excavation. The north tower is founded, as at the east gate, on a rubble platform, laid in three layers, not very

[11] Stukeley, *Iter Boreale*, pl. 65.

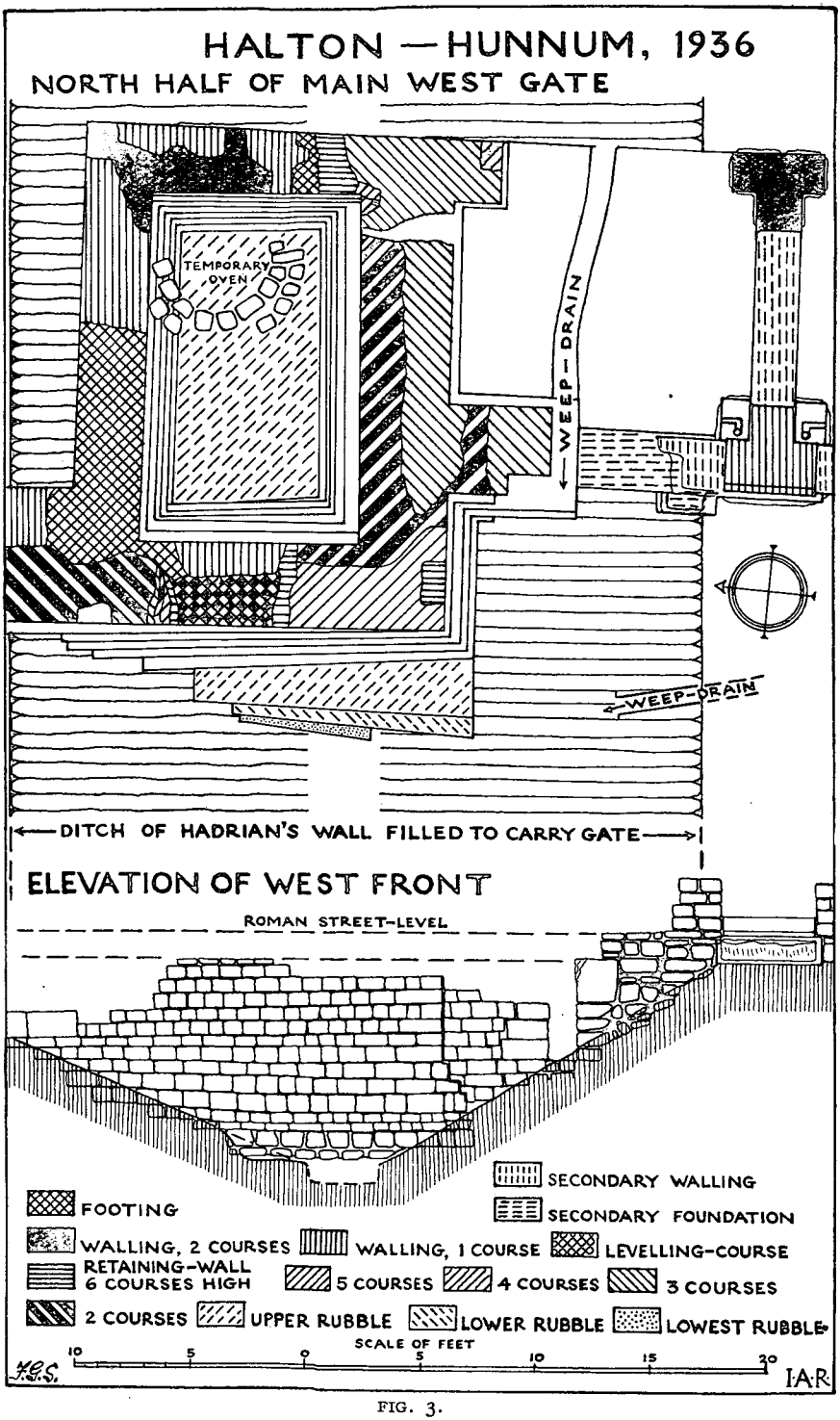
HALTON — HUNNUM, 1936
NORTH HALF OF MAIN WEST GATE
TEMPORARY OVEN
WEEP-DRAIN
WEEP-DRAIN
DITCH OF HADRIAN'S WALL FILLED TO CARRY GATE
ELEVATION OF WEST FRONT
ROMAN STREET-LEVEL
SECONDARY WALLING
FOOTING
SECONDARY FOUNDATION
WALLING, 2 COURSES
WALLING, 1 COURSE
LEVELLING-COURSE
RETAINING-WALL 6 COURSES HIGH
5 COURSES
4 COURSES
3 COURSES
2 COURSES
UPPER RUBBLE
LOWER RUBBLE
LOWEST RUBBLE
SCALE OF FEET
10 5 0 5 10 15 30
H.G.S.
I.A.R.

FIG. 3.

well related either to one another or to the masonry above them. Perhaps the workers, like the excavators, were hindered on this slope by water, and could not see what they were doing. The upper foundation, in five courses, is well laid, with bold offsets as at the east gate, while the retaining-wall, of six courses, has an unbroken vertical face. Within the guardchamber no flooring remained, but the clay filling which had carried the floor extended for only a little way below it, sealing a mass of lime-mortar piled against the south-west corner of the chamber, and an oven set in the north-west corner. It was evident that this part of the building had been used during erection as a masons' shack. From this point downwards to the rubble raft, the space between the walls had been filled with cut blocks of peat-like material, which Dr. Raistrick's report (see appendix) reveals to be blocks cut from the moss-covered surface of the boulder-clay. On a site which had required terracing there was doubtless surface levelling also to be done, and these blocks may be regarded as the products of such an operation.

(iii) THE GATES AND THE RELATION OF FORT AND WALL.

When the structure of the gates has been described, there is no longer room for doubt as to the relation of fort and Wall. The ditch of the great Wall, as first planned, ran from east to west, straight across the site of the existing fort and almost on the line later taken by that fort's main cross-street. When the fort was built, the ditch was filled up and very carefully laid foundations were set in it to carry the main gateways. Underneath the main street, the ditch-filling was examined on the axis of the fort, at the junction of the *viae principalis* and *praetoria* and at a point thirty-five feet further east. In both places, the samples secured showed a filling of moss-covered surface clay, as in the north tower of the west gate. But, while the tower-filling had been packed into place in recognizable blocks, the easternmost sample from the ditch below the

road was much broken and crushed. Dr. Raistrick's impression (see appendix) was that it had been pounded, either by beating or treading. At all events, it is evident and not surprising, that different treatment was accorded to filling not boxed in by masonry. It remains to note that, while our evidence is insufficient to show whether the ditch was interrupted by an original causeway, it attests that no such causeway occupied the axis of the later fort. This was also Haverfield's experience at Chesters, as Mrs. Hodgson's recorded[12] section shows. What then was the date of these changes? This is given by the dedication-slab from the west gate (pl. XXIII). The text, in good lettering, 3½ and 3 inches high, runs as follows: Imp. Caes. T*ra. Hadriani* | Aug. Leg. VI *Victrix p. f.* | A. Platorio Ne*pote* | Leg. Aug. pr. *pr.* The centre of the slab, below the fourth line, is marked by a leaf. The border is formed by a moulded frame, and flanked by a crescentic shield, with knobbed terminals, taking the place of the more normal ansate device. Two *peltae*, above and below the shield, carry on the horizontal lines of the once adjacent masonry. The text resembles that from milecastles 37, 38, 42 and 50TW, known to be among the earliest structures[13] built on the Wall. Thus, although the Halton gateways and, *a fortiori*, the fort to which they belong, are secondary structures, it is evident that even this secondary work was being built before the governorship of Nepos ended. His term of office began[14] in A.D. 122 and is not likely to have

[12] *CW*² i, 84-6, pl. II.

[13] Milecastle 37, *AA*⁴ xi, 103-120; milecastle 38, *AA*⁴ xiii, 263-9; milecastle 42, *ibid.* 269-70. The inscriptions are *C.* 662 from 37, 661 from 38, and 663 from 42. *C.* 713, in the same style, was noted in a field-dyke near Chesterholm, while *C.* 660 is also of doubtful provenience. *C.* 660 and 661 read *Hadriani*, the second *i* clumsily added in the latter; 662 and 663 are broken at the critical point; 713 reads *Hadriano*. Among related inscriptions, *C.* 362, from Moresby, reads *Hadriani*, while the lost *C.* 961, from Netherby, bore *Hadriano*. We may thus take our choice, and on this stone the genitive fits the space better. For 50TW see *CW*² XXXV, 229-31.

[14] On July 17, 122, Nepos was discharging auxiliaries as governor, and had recently succeeded Falco (*JRS* XX, 18). He was still governor late in 124, as another discharge-sheet shows (*C.* 1195).

lasted beyond A.D. 126. The importance of this discovery is evident. It implies that the secondary scheme for Hadrian's Wall was an afterthought in the same design and not the innovation of someone new to the work. Of the arrangements which preceded the secondary fort, now so clearly dated, we have as yet no knowledge. It is evident, however, that as part of the Wall-system they had no long life.

(iv) THE PRAETENTURA (fig. 5).

The north gate (fig. 4) was much robbed. Trenching showed that all structural remains east of the central piers were entirely removed. Of the piers, only foundations exist, and even half of these had been taken from the outer pier. The remaining half exhibited the foundation-block with a worn pivot-hole, served by a runway with right-angled turn, at which the contained piece had broken off. The inner pier, though corresponding to the outer one, is without rebates for doors, like all the gates[15] of Housesteads, or the west gate[16] of Greatchesters. In this respect it differs from the east and west gates. Between the outer pier and the outer west jamb a threshold had been ripped out. The east wall of the west tower was reduced to the level of the guardchamber door-sill, marked by two pivot-holes. The main pivot-hole of the gate had been served by a right-angled runway which had broken off. One course of the inner jamb remained in position. In the portal, an exceptional, if not wholly intelligible, secondary structure calls for comment. This is the foundation (large re-used blocks), core, and broken east face of a wall which reduces the width of the 10-foot portal by about 2½ feet. The structure is reminiscent of the reducing-walls in mile-castle-gateways,[17] particularly nos. 37, 50, 52 and 54. It is

[15] *AA*[2] xxv, pl. xix.

[16] *AA*[2] xxiv, pl. ii.

[17] Milecastle 37, *AA*[4] xi, pl. xvii; 50, *CW*[2] xiii, 321-22, pl. xiii; 52, *CW*[2] xxxv, 251, fig. 23; 54, *CW*[2] xxxiv, 145, figs. 9 and 11.

the first of its kind to be noted in a gateway of a Wall-fort, and is rare in forts elsewhere, though modifications of this type occur both at Malton and Elslack.[18] Too little of the structure remains, however, to be wholly comprehensible, and it is recorded here for completeness rather than for historical service.

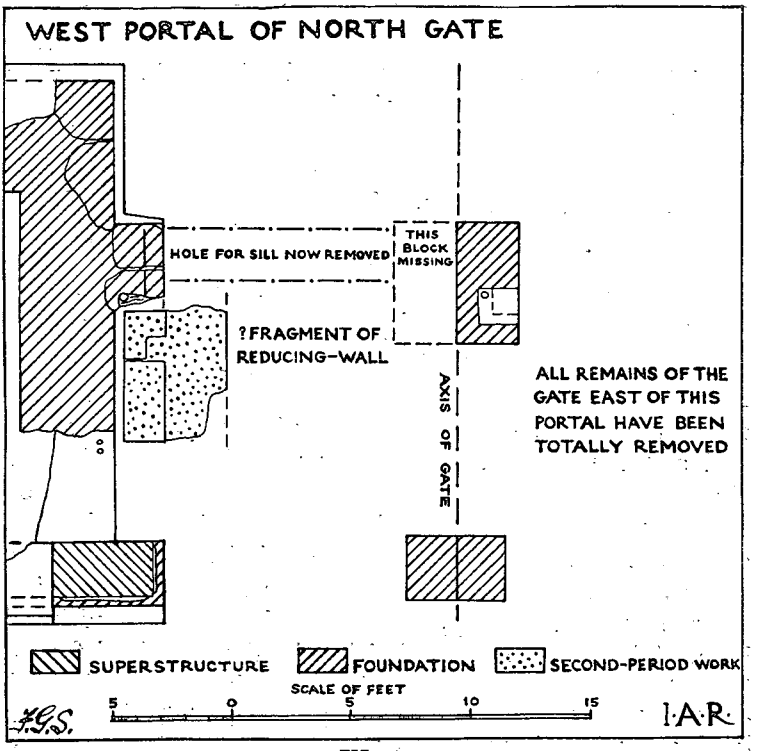

FIG. 4.

Behind the site of the east tower lay a later water-tank, of which the south side, 16½ feet long and built of five re-used stone slabs, covers the presumed width of the tower. The slabs had been slotted for lead flashing at the joints, and small holes on their inner sides had once contained

[18] *The defences of the Roman fort at Malton*, 50, fig. 13. Elslack, *Yorks. Arch. Journ.*, xxi, plan XIX, west gate of later fort.

hold-fasts for a lead lining. One slab was pierced by a plug-hole. The tank had evidently been intended to receive rain-water from the roof of the tower, and closely resembles in form and intention the tank[19] behind the south-east angle-tower at Housesteads. Another tank, of Hadrianic date, was noted below a secondary wall abutting upon the west pier of the entrance to the forehall from the *via praetoria* (see below, p. 168). It was three feet wide from east to west, and of undetermined length. Only its slotted foundation-flags remained.

Barracks and stables. The north-east half of the *praetentura* yielded the following remains (fig. 5). The east side of the *via praetoria* was occupied by one long undivided building, 128 by 18 feet, entered by a single small doorway and probably used for stores. This has analogies[20] at Housesteads (building 15) and Birdoswald. A second building, 130 by 28½ feet, separated by a narrow alley, fronts a 15-foot north-to-south street. The north and south ends of this building were traced, and each showed the termination of double compartments, typical of a barrack. The next building, 130 by 60 feet, is also double. At the south end of the west half an 11-foot room occurs. The east half opens on to the *via principalis* with a large 10-foot doorway, with checked threshold and bolt-hole. There is no cross division in the east half for at least 82 feet to the north, and the north end of this half produced a deep layer of burnt straw. The doorway, though wide, exhibits no wheel-ruts on its well-trodden threshold. The building may therefore be recognized as a stable. That Halton held a cavalry-garrison in the third century is already known from an inscription;[21] while the same garrison is attested in the fourth century by the

[19] *AA*² xxv, 250, pl. xviii.
[20] Housesteads, *ibid.*, 240, pl. xix; Birdoswald, *CW*² xxx, 172, fig. 1
[21] *C.* 571.

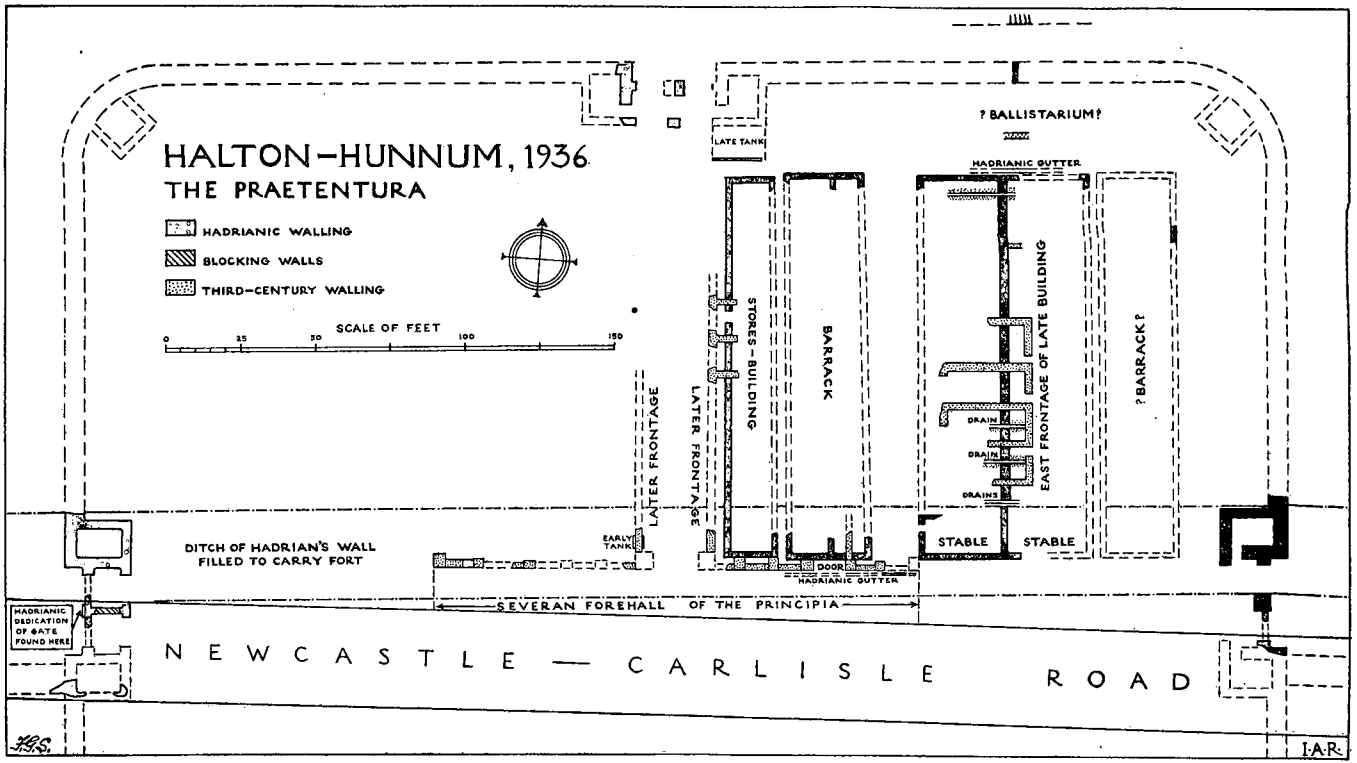
HALTON–HUNNUM, 1936
THE PRAETENTURA
HADRIANIC WALLING
BLOCKING WALLS
THIRD-CENTURY WALLING
SCALE OF FEET
0 25 50 100 150
? BALLISTARIUM?
LATE TANK
HADRIANIC GUTTER
STORES-BUILDING
BARRACK
EAST FRONTAGE OF LATE BUILDING
? BARRACK?
DRAIN
DRAIN
DRAINS
LATER FRONTAGE
LATER FRONTAGE
EARLY TANK
DITCH OF HADRIAN'S WALL FILLED TO CARRY FORT
STABLE
STABLE
DOOR
HADRIANIC GUTTER
SEVERAN FOREHALL OF THE PRINCIPIA
HADRIANIC DEDICATION OF GATE FOUND HERE
NEWCASTLE — CARLISLE ROAD
H.S.
I.A.R.

FIG. 5.

Notitia Dignitatum (*Oc.* XI, 37). It is now clear that the type of garrison was constant.

The wide stable comes too near the *intervallum*-road to allow for another street, thus explaining the provision of a great door on the *via principalis*. There is, however, just room (28 feet) for a second barrack, of the type noted already; but of this building our trenches located the east wall only. It would thus appear that there were quarters for two units of men and their horses in one half of the *praetentura*. Duplicating this, as we are entitled to do, it is evident that the *praetentura* held half the garrison, a quingenary *ala*. It was a tight fit, less roomy than the quarters of a milliary cohort, though the men[22] themselves had perhaps somewhat more space in their *contubernia*.

Although the remains of this part of the fort were much reduced, something was ascertained about the arrangements of the second period (fig. 5). At this time, in order to gain space, the *via praetoria* was reduced in width. Three cross-walls belonging to a later barrack were noted at intervals of 12 feet while tracking the west wall of the Hadrianic stores-building on the east side of the street; and these were shown to link with a north-to-south wall marking the east edge of the street and connecting in turn with the piers of the great entrance to the forehall, described below (p. 168). Similarly, a minor doorway in the third bay from the east end of the north façade of the forehall gave immediate access to a north-to-south street. Further to the east, over the Hadrianic stables, other secondary structures were detected in a north-to-south trial-trench. These consisted of a series of five small rooms from which the flooring had been removed, leaving only the remains of an open drain running on the east-to-west

[22] According to Arrian, *Tactica*, 18, an *ala quingenaria* had 512 men, divided, as proved by *de mun. castr.* 16 and *C.I.L.* iii, 6581, into 16 *turmae*, each therefore 32 men strong, like a *turma* of *equites legionis* (Veget. ii, 14). If the Halton *praetentura* held eight *turmae* in four barracks, we should get 64 troopers per barrack, instead of 80 infantrymen.

axis of each room. The drains were filled with burnt wattle-and-daub, attesting the nature[23] of the destroyed and vanished superstructure; elsewhere than the drains all traces of fire had been removed, together with the floor, except for a scatter left in the removal. This vanished floor was doubtless flagged, since nothing else but flags would be worth removal. The rooms may therefore be interpreted as flagged stables, carefully drained, but divided into compartments by stone walls. Each room, 26 by 11 feet internally, would amply contain the horses of eight men.[24] If this building was a double one, its west front would fall in alignment with the north-to-south street served by the minor doorway of the forehall, to which reference has already been made.

To north of the Hadrianic stables, the trial-trench was carried up to the outer face of the fort-wall and to the lip of a ditch 12 feet beyond. The fort-wall had been robbed down to its footings at the front, though one course of walling remained at the back. It might be expected that we should then have encountered the vertical face of the clay rampart packed in behind the wall. Actually, it seemed certain that another structure had taken the place of the bank at this point. For stone-robbers had been at work where the clay bank should have occurred, removing the superstructure from a heavy pitching of stones and clay, extending for 30 feet behind the rampart, up to the *intervallum*-road. This structure is altogether too large to have been a tower, and is best explained as a *ballistarium*, comparable in size with that recently discovered[25] at High Rochester. That machines as big as this platform demands were in use during the second century at Halton is attested by the discovery of a hundredweight *ballista*-ball, as big as those from High Rochester

[23] At High Rochester the third-century barracks were also half-timbered on stone sills, see *AA*[4] xiii, 180.

[24] See note 22 above: presumably the division was into eight men, but in roomier quarters.

[25] *AA*[4] xiii, 180-1, pl. XIII.

or Risingham, deep down in the filling of the Wall-ditch in front of the east gate. It may be remarked that the north front of the fort has no very commanding position, and that the barracks are so arranged as not to permit a very rapid manning of the north rampart. Nor were troopers so well fitted as infantrymen for wall-fighting. The provision of *ballistaria* at this point would be an effective deterrent to a massed attack.

The forehall. The Hadrianic *via principalis* was a cambered road, of river cobbles bedded on broken stone, bordered by gutters cut in soft stone blocks, of the type also noted elsewhere[26] in the fort. It showed signs of much use. After the destruction of A.D. 197, the road was completely re-surfaced. It no longer had either camber or drains, but was flat and laid against a monumental façade, consisting of large stone pier-foundations, 4 feet square, linked by a 2-foot panel wall. The system of construction resembles that used in the third-century *principia* at Chesterholm,[27] though there was no evidence here as to the material used for the upper part of the panels. The walling ran east and west on either side of the junction of the *viae principalis* and *praetoria*, where much larger piers had been almost completely removed by stone-robbers, only the earth-filled gap and foundation-flags marking their position. At the east end, the terminal-pier had also been removed: but the west terminal-pier was intact, and showed an extra strengthening indicative of a return across the *via principalis*. The piers are not quite symmetrically planned, since the large doorway leading to the street on the east has no counterpart on the west, while the narrow doorway on the west is not repeated in the east wing. But the missing pier on the east falls at the same distance from the axis of the *via praetoria* as the terminal-pier on the west. It may thus be assumed that the building was 160

[26] Gutters were noted at two points on the south side of the north *intervallum*.

[27] *AA*[4] xiii, 231-2.

feet long from east to west, and that it spanned the 30-foot *via principalis*.

It is now evident that the great building falls into place as a large forehall in front of the *principia*. Not only is it the first of its kind to be discovered on the Wall, but it is more elaborate than any yet discovered in Britain, where the forts[28] of Newstead and Brecon provide the only parallels. It is closely matched, however, even in style of construction, by not a few examples from the German *limes*. The closest parallel is Theilenhofen,[29] where the hall is arranged in relation to side streets as well as to the *via praetoria*; but at Theilenhofen, the side streets are symmetrically planned, while at Halton they are evidently not so regular. At this point it will be well to consider the relation of the Halton forehall to the adjacent buildings a little more closely. It has already been noted that the *via praetoria* of the second period was narrower than the earlier road below it and that the party-walls of a barrack cross the front wall of the Hadrianic stores-building on to the later frontage. This frontage is deliberately linked with the east pier of the main entrance to the forehall, and the end of the corresponding frontage was also found at the west pier. Again, the east frontage of the eastward side street was also found in contact with the pier of the side door. It is evident that in this second period all the buildings adjacent to the forehall were linked[30] with it, as at Lambaesis and the towns on which the idea is based, to form a unified architectural conception. It is clear also that in order to light the forehall the windows must have been placed high in the front wall above the roofs of the adjoining buildings, so that the forehall would dominate all other buildings, except perhaps the crosshall of the *principia* behind it. The famous forehall at Lambaesis is

[28] Newstead, 160 by 50 feet, *A Roman frontier-post*, 43-4, fig. 2: Brecon, 147 by 40 feet, *The Roman fort near Brecon*, 41-2, fig. 30.

[29] Theilenhofen, *ORL* xxiv, pl. 1; cf. Butzbach, *ORL* i, pl. 1.

[30] Lambaesis, Cagnat, *Les deux camps de la légion III Auguste à Lambèse*, 19, fig. 2. Haverfield, *Ancient town-planning*, 112, 118.

arranged on much the same principle, with high windows supplied for the same reason. What, then, was the purpose of such a hall? At Halton, it is evident that much of the garrison could parade in it dismounted, if that were a parade for a cavalry regiment. If, however, the hall was not used for parade, it may well have been used for exercise. Is it in fact to be compared with the almost contemporary *basilica equestris exercitatoria*, built at Netherby[31] in A.D. 222? It should be observed that not only does its design resemble that of a riding school, but that the plan of the fort as a whole allows no space for a *basilica equestris* within the ramparts except astride one of the main streets. In such a hall as the Halton building four men abreast could be trained on each side of the main entrance without blocking it; and this may well have been the principal use to which the building was put.

In conclusion, the warmest thanks of the committees are offered to the land-owners, Sir Hugh Blackett, Bart., and the Northumberland County Council; also to Captain Ralph Blackett, of Halton Red House, and Mr. Bolton, his bailiff; and to Mr. T. R. Henry, agent for the Matfen estate. Our special thanks are also due to Mr. Alexander Cheyne, the county surveyor, and Mr. J. D. Walters, divisional surveyor, whose kindness greatly facilitated the work on the road.

[31] *C.* 965. Wheeler, *The Roman fort near Brecon*, 43-4, observes that on the German *limes* the forehall is commonly, but apparently not exclusively, associated with mounted troops. It should be observed that the British examples are all associated with cavalry. A good example of a monumental riding-school for comparison is furnished by the imperial riding-school at the Schönbrunn palace, Austria.

Fig. 2. HALTON CHESTERS: FOUNDATIONS OF MAIN EAST GATE, BUILT ACROSS THE DITCH OF THE GREAT WALL.

Fig. 1. HALTON CHESTERS: FOUNDATIONS OF MAIN WEST GATE, BUILT ACROSS THE DITCH OF THE GREAT WALL.

HALTON CHESTERS: DEDICATION-SLAB OF HADRIAN AND PLATORIUS NEPOS FROM MAIN WEST GATE. A.D. 122—c. A.D. 126.

APPENDIX.

Report upon geological samples, by A. Raistrick, M.A., Ph.D.

1. Filling below the floor of the north tower, main west gate.
   The material is good clean sandy silt, with no true clay grade present, which has been covered with moss,[1] and cut in clean blocks. It is the kind of material that would accumulate by washing and soil-creep in any slight hollow on the drift surface, with an impeded drainage sufficient to carry moss, but not to form peat.
2. Filling of the ditch of the great Wall, outside the main west gate.
   The sample is like no. 1 in all respects, except that it has been more broken and mixed. Thick patches of moss are mixed in everywhere. The material might be the top layers of the original site from which nos. 1 and 3 were cut.
3. Filling of the ditch of the great Wall, from the junction of *viae praetoria* and *principalis*, on the axis of *via praetoria*.
   The material is true boulder-clay, containing pebbles up to 2 inches in size, mostly sandstone. There is a very small sand fraction, and some fragments of the moss layer are present. It has been cut in large blocks.
4. Filling of the ditch of the great Wall, obtained 35 feet east of sample 3.
   The material resembles that of sample 3, but with less clay fraction, and more organic remains present. There is some moss, but it is mainly grassy material, with grass spores. The whole has been much mixed and broken into small blocks, as if by pounding.

[1] Miss E. M. Lobley kindly reports that there are two mosses in this sample; much *hylocomium squarrosum B & S*, which is common upon grassy banks, and a little *hypnum cuspidatum L.*, which occurs in wet meadows and marshy places. This usefully confirms our interpretation of the material.