

## VI.—EXCAVATIONS ON THE ROMAN WALL AT LIMESTONE BANK.\*

By P. NEWBOLD.

[Read on the 31st July, 1912.]

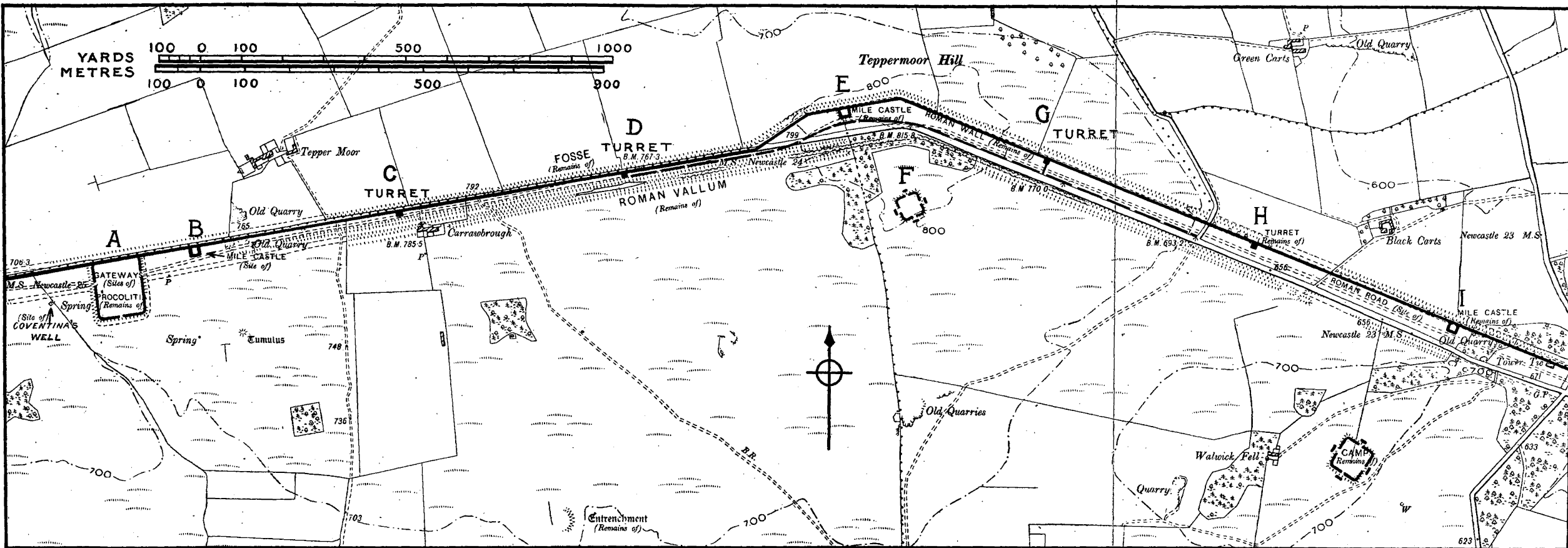
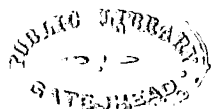
The recent discovery of the system on which the turrets on the Roman Wall were originally laid out,<sup>1</sup> led me to examine, during the winter 1911-1912, the eastern part of the Wall, with a view to locating the turrets, where possible, by surface indications. This was followed by excavations in the spring of 1912, which resulted in the discovery of three turrets, one of them being completely cleared out and carefully examined. These turrets are the three next in succession to the west of the well-known example on Blackcarts farm, which was laid bare in 1873 by the late Mr. John Clayton and the first of these structures ever excavated.

The positions of these turrets are as follows<sup>2</sup> (plate 1):—

\* My best thanks are due to Mr. G. L. Cheesman, of New College, Oxford, and to Mr. F. G. Simpson, who, in my absence, kindly undertook the reading of the proofs and final revision of this paper.

<sup>1</sup> Mr. Percival Ross in a pamphlet entitled *The Turrets and Milecastles on the Roman Wall in Northumberland* (Bradford, 1904), first suggested that there were two turrets between every pair of milecastles, and subsequent excavations by Mr. F. G. Simpson (1910-11) proved this suggestion to be correct. At an average distance of 500 to 550 yards on each side of every milecastle a turret is to be found.

<sup>2</sup> These distances were chained on the ground and are therefore more correct than those given by Mr. Ross, *op. cit.*, pp. 16, 17, which are taken from the 6 in. O.S. maps. They were measured along the line of the Wall from the actual or estimated centre of each structure. The position of Carrawburgh milecastle is incorrectly laid down on the ordnance maps (25 in. Northumberland, LXXXIV, 3). It really lies only 120 yards east of the east rampart of Carrawburgh fort (*Procolitia*).



MAP OF THE ROMAN WALL IN THE NEIGHBOURHOOD OF LIMESTONE BANK.

Reproduced from the Ordnance Survey Map with the sanction of the Controller of H.M Stationery Office.

SCALE: six inches = one mile.

The broken line indicates the course of the Military Way, where ascertained by excavation. A = Carrawburgh Fort. B = Carrawburgh Milecastle. C = Carrawburgh West Turret. D = Carrawburgh East Turret. E = Limestone Bank Milecastle. F = Walwick Fell Fort. G = Limestone Bank Turret. H = Blackcarts Turret. I = Tower Tye Milecastle.

LIBRARY  
SIR JOHN H. ...  
1871

LIBRARY  
SIR JOHN H. ...  
1871

Tower Tye milecastle	} 1596 yards.
Blackcarts turret, 534 yards.	
Limestone Bank turret, 534 yards.	
Limestone Bank milecastle, 528 yards.	} 1662 yards.
Carrawburgh east turret, 594 yards.	
Carrawburgh west turret, 539 yards.	
Carrawburgh milecastle, 529 yards.	

It will be observed that the first two turrets lie almost exactly at points one third of the distance between the milecastles; while the Carrawburgh turrets are less regularly placed, lying 40 and 25 yards respectively west of the one-third distance. A possible explanation of this irregularity is given below.

#### I.—CARRAWBURGH WEST TURRET.

The site of this turret is marked by a distinct mound adjoining the south wall of Wade's road in the grass field in which Carrawburgh farm-house stands. A single trench into this mound immediately brought to light burnt rubbish, bones, pottery and masonry *débris*. The trench apparently struck the top of the west wall of the turret; unfortunately time did not allow of clearing the face of the masonry, but I should estimate that the west wall is still standing three to five courses high and that half or even more of the turret lies within the field and the rest under the grass on the south edge of the road; therefore the whole structure could probably be excavated without interfering with the surface of the modern road.

#### II.—CARRAWBURGH EAST TURRET.

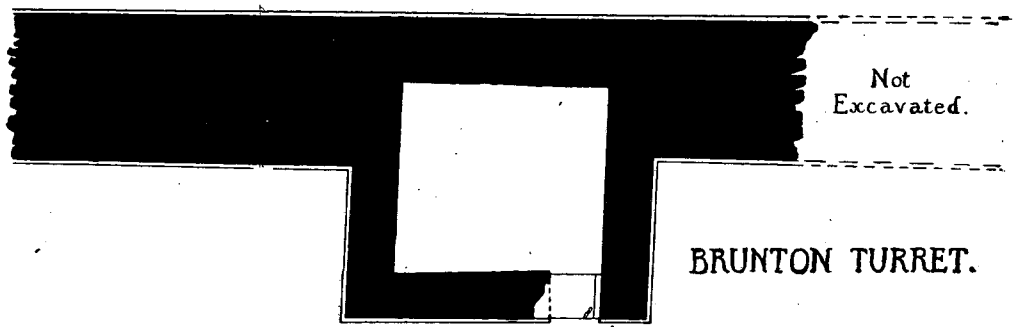
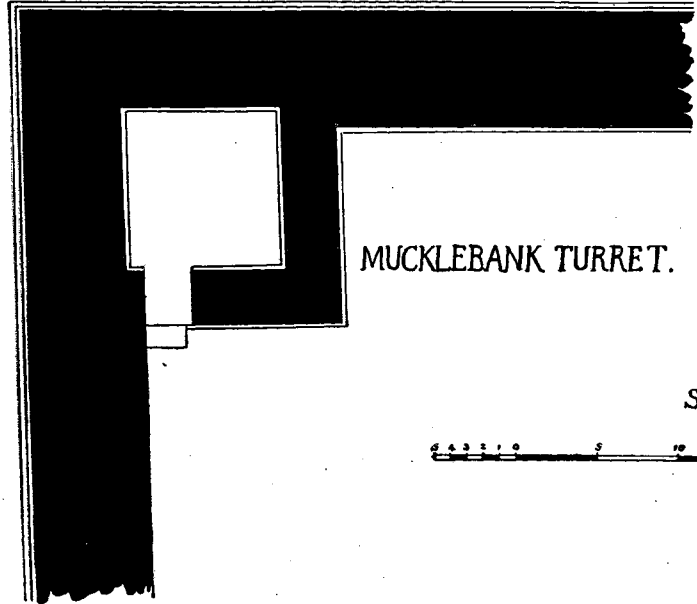
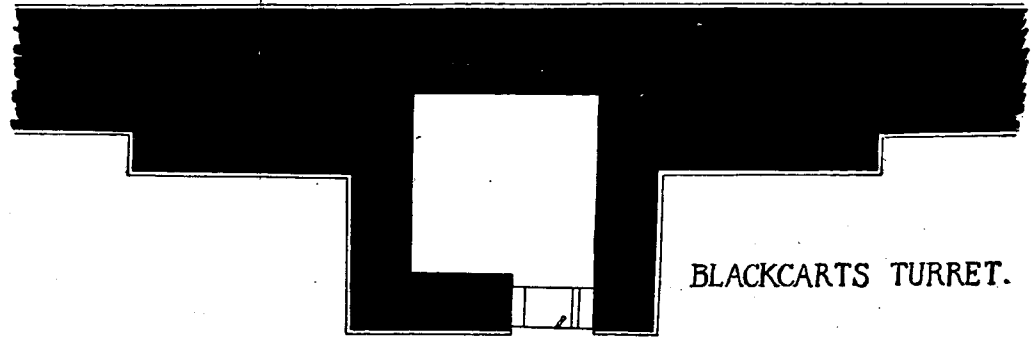
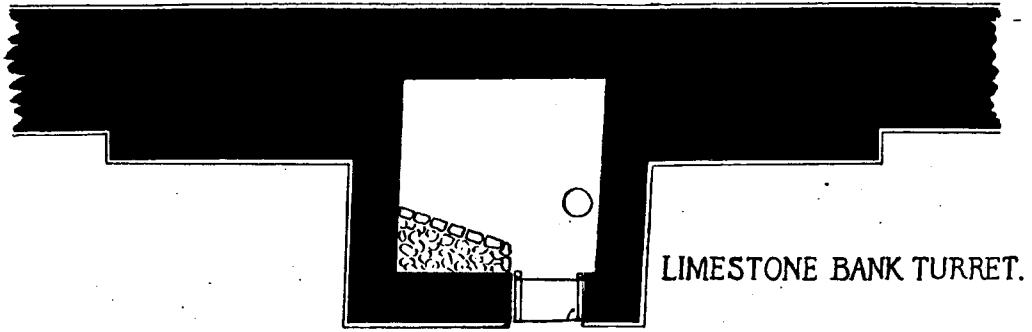
The greater part of this turret lies under the metalling and the grass at the side of Wade's road. The south face of the south wall of the building was found at a distance of only 1 foot.

6 inches south of the stone dyke on the south side of the road,<sup>3</sup> and was standing to a height of only two or three courses. The usual foundation of large whin cobbles set in clay lay 2 feet 6 inches below the modern surface. Above this came the first masonry course with the usual offset of  $2\frac{1}{2}$  to 3 inches, and above one or possibly two courses of the smaller masonry.

### III.—LIMESTONE BANK TURRET (plate II).

Considerable remains of this structure existed and were entirely uncovered with interesting results. The building follows the usual plan (see plate II) except for the uncommon feature of the thickening of the great Wall as it approaches the turret on each side (fig. 3). These thickenings or long buttresses occur also at Blackcarts turret (see plate II), and have since been found by Mr. Simpson at Steelrigg turret. In these three instances we find the great Wall for a distance of 10 to 15 feet on each side of the turret expanded to a thickness of about 9 feet 6 inches. Certain indications at Blackcarts turret suggested that these thickenings were later additions and that the original face of the great Wall ran through behind them. But examination of the interior of the great Wall at Limestone bank turret proved that this was not so. The core of the great Wall and of the 'buttress' or thickening is absolutely homogeneous down to the foundations and the same fact was clearly evident at Steelrigg turret, shewing that great Wall, 'buttresses' and turret were built at one and the same time. At Brunton turret the great Wall is 9 feet 3 inches thick, but here there is no abrupt expansion as in the other three instances, but apparently a gradual thickening of the Wall as it approaches the turret; about 50 yards west of the turret the Wall is 7 feet 10 inches thick.

<sup>3</sup> The exact position of the trench which struck the turret was 6 feet east of a wooden rail-fence which is not marked on the 25 in. O.S. map (1896 edition), but comes up from the south and crosses the pond which lies in the ditch of the Vallum.



SCALE



1910  
MAY 10  
1910

1910  
MAY 10  
1910

1910  
MAY 10  
1910



FIG. 1.—LIMESTONE BANK TURRET, FROM THE EAST.



FIG. 2.—GENERAL VIEW, FROM THE WEST.

From photographs by Mr. T. Hepple.



The purpose of this thickening is not quite clear seeing that it only occurs in four out of the ten turrets of which the ground-plan is known; but apparently it bears some relation to the super-structure of the turret and the passage of the rampart-walk over the ground-floor chamber.

The turret walls are bonded into the great Wall and *vice versa* in the usual way, *i.e.*, alternate courses of each projecting into the other. The masonry of both is of the same material and character, and there was not the slightest indication of rebuilding or repair work.

The bottom course (above the whin-cobble and clay foundations) of the great Wall (on both the north and south faces), 'buttresses' and turret walls, is composed of larger stones than the upper courses and shows an offset, as elsewhere, of 2 to 4 inches. The stones of the bottom course of the south wall of the turret are very massive.

The doorway is at the eastern end of the south wall, where the east wall has a return only 9 inches long. (At Blackcarts turret there must originally have been a similar short return of the east wall; probably it was inadvertently removed when the turret was excavated).

The entrance is paved by a single massive threshold stone,  $8\frac{1}{2}$  inches thick, which passes under the end of the wall to the west to the extent of 5 inches.

The jambs of the door were of timber or more probably stone. The shallow slots in this stone received them and the masonry on each side of the entrance is very roughly finished and still covered by the mortar which filled the space behind the jambs. At the interior end of each of the grooves in the threshold stone is a post-hole the top lined with stone, 6 inches square and 8 inches deep. There is also a pivot-hole (fig. 4) as at Blackcarts turret, where the doorway arrangements were identical. This doorway stone must have served for both the floor-levels.



FIG. 3.—EAST THICKENING OF GREAT WALL, LOOKING WEST.



FIG. 4.—INTERIOR, LOOKING SOUTH.

From photographs by Mr. T. Hepple.

The interior of the structure was filled with the tumbled *débris* of the great Wall and the turret walls, among which were a number of broken roofing-slabs of freestone, many pierced for nails. Below this masonry *débris*, but above the burnt rubbish marking the top occupation level were three or more much larger and thicker flat freestone flags, the largest of which measured 2 feet 4 inches, by 1 foot 7 inches, by 2½ inches. Similar large flags were found in the same position in Mucklebank turret by the late Mr. J. P. Gibson, who suggested that they had formed the floor of the upper chamber or the paving of the rampart-walk.<sup>4</sup> Here, too, were found a number of large iron nails.

Below this masonry *débris* two occupation levels could be traced, each being marked by about 6 inches of burnt rubbish. The upper floor had originally been composed of freestone flags and whin boulders, possibly mortared, but very little of this paving remained in place, having been partly destroyed by the conflagration which marked the end of the occupation, and partly displaced by the fall of heavy masonry from the walls. Consequently it was unfortunately impossible, for the most part, to distinguish with certainty the level to which the potsherds found in the burnt rubbish belonged. An important exception was a complete flat-rimmed bowl (plate III, no. 3) which was found lying mouth downwards and smashed to pieces in the *débris* underneath the upper floor. The lower floor (contemporary with the building of the turret) was formed of beaten clay:

The south-west corner of the interior was occupied by a rough masonry platform<sup>5</sup>, faced with a line of roughly-squared freestone, while the rest was composed of large whin cobbles over which mortar had been poured. As it had been largely damaged

<sup>4</sup> *Arch. Ael.*, 2 ser. xxiv, p. 14.

<sup>5</sup> 7 feet 1 inch long, 3 feet 8 inches wide at the western end narrowing to 2 feet by the entrance, and about 1 foot high.

by visitors after being uncovered, it was taken out to examine its structure. A few scraps of pottery were found among the rubble of which it was composed, and at the western end a large freestone slab (2 feet by 2 feet 3 inches by 3 inches) was found lying beneath it and resting on the undisturbed soil. Mere fragments of similar platforms have been found in other turrets,<sup>6</sup> but their purpose is not clear, unless they formed the base for some sort of stairway to the upper part of the building.

At the centre of the west wall where the masonry showed signs of very heavy burning, was found a large rectangular whinstone slab (singularly regular for a natural block) which had evidently served as a hearth, since under and around it lay much charcoal.

Not far within the doorway against the east wall of the turret were the remains of an *amphora* carefully set in fine yellow clay which was packed round with whin cobbles. The neck and handles of the vessel were missing, and the rest badly smashed by the stones fallen from the wall above, a roofing-stone had fallen right into and through the lower half, which, however, retained its shape, being held in position by the clay. No doubt the vessel served to store the drink of the sentries stationed in the turret. Two other turrets<sup>7</sup> have produced the remains of an *amphora*, though not found like this *in situ*.

Both the *amphora* and platform were clearly in use when the turret was abandoned, but both appeared to be posterior to the first destruction of the turret by fire. Besides a large quantity of pottery (described in detail on page 66), the rubbish of the two floors produced an iron shield-boss of the normal pattern, a large leaf-shaped socketed spear-head (10 inches long), two bronze penannular brooches, several indeterminate fragments of bronze,

<sup>6</sup> e.g. Steelrigg and Peel Crag.

<sup>7</sup> Mucklebank (*Arch. Ael.*, 2 ser. xxiv, p. 16), and the destroyed turret east of Carvoran (*Ibid.*, 2 ser. ix, p. 235).

a small blue bead, pieces of millstones, both of local stone and of Andernach lava, a flint scraper and a flint core, and a broken stone-slab scored for a draughts-board exactly like examples found at Corbridge and Chesters.<sup>8</sup>

In clearing the eastern 'buttress,' two fallen facing stones were found, one inscribed with a deeply-cut v ( $2\frac{1}{4}$  inches high) and the other with x or xi roughly incised.

That the occupation of the turret was comparatively short is clearly shown by the small amount of rubbish in the interior (about 10 inches in all) and the absence of any signs of reconstruction, beyond the existence of two floor levels very close together. Unfortunately no coins were found to help in fixing the limits of the occupation, the evidence for which consists, however, in the pottery, which luckily was both considerable in quantity and distinctive in character. An examination of this (it is described in detail below) shows the presence of fragments undoubtedly belonging to the early part of the reign of Hadrian on the one hand, and an entire absence of any of the types characteristic of the third and fourth centuries on the other, and leads to the conclusion that the occupation begins with the early years of Hadrian and ends somewhere towards the close of the second century. The two levels, the amount of rubbish connected with each, and the nature of the pottery found therein, are exactly parallel with the two lowest *strata* in all the turrets and milecastles on the Wall which have been carefully excavated with detailed observation; and I think it probable that these two levels cover the years from about 120 A.D. to about 200 A.D. and form what has been styled for convenience period I in the structures connected with the Wall. There is less certainty about the date of the break in this period when these structures were destroyed by fire and the second floor

<sup>8</sup> All the finds including the pottery are now deposited in the museum at Chesters.

level formed, but somewhere about the years 158 to 160 A.D. would seem to suit best both the archaeological evidence and the historical circumstances.

So far then this turret presents an exact analogy to others (Peel Crag, Steelrigg and High House) which are now known to have been abandoned near the close of the second century; but whereas in these other examples the walls appear to have been carefully taken down almost to the foundations and the stone used for building up the recess where the turret projects into the thickness of the great Wall, in this case the structure was left standing in ruins, with the recess not walled up, for the remaining two centuries during which the Wall was maintained as the frontier barrier. This fact seems very strange and I have no explanation to offer; perhaps future excavations may disclose other turrets where the same circumstances obtained. The discovery of a coin or coins of Constantine in the neighbouring Blackcarts turret<sup>9</sup> shows that it was not similarly abandoned.

#### IV.—THE FOSSE.

A cut in the bottom of the fosse, immediately north of Limestone bank turret, revealed a feature which, I believe, has not been previously observed in connexion with this ditch. As is well-known the ditch is v-shaped; but in this instance the two sides did not meet at a point but fell away so as to form a shallow gully (about 1 foot deep and 3 feet wide) with vertical sides. The same thing occurs in the ditch of the Turf Wall at Appletree and of the Antonine Wall (see Macdonald, *Roman Wall in Scotland*, p. 100 and fig. 1).

#### V.—THE TURRET ROAD AND THE MILITARY WAY.

A road, 11 feet wide, branching off at right angles from the military way led to the turret. Where examined at a point 40

<sup>9</sup> *Arch. Ael.*, 2 ser. VII, p. 256. 'Coins of Vespasian, Trajan, Hadrian, and Constantine the Great were turned up in the course of the digging.'

feet from the turret it showed no definite edge on either side and the metalling, which was 6 inches thick, had spread to a width of 17 feet. At its junction with the military way both kerbs, formed of largish whin cobbles, were in position.

The military way itself was traced by a number of trenches all up Limestone bank and also west of the milecastle on the summit. The line laid down on the ordnance survey map (25 inches) was discovered to be entirely incorrect, and the road was found to run where Horsley and other early observers had noticed it, immediately under (*i.e.* north of) the north mound of the Vallum, which is now occupied by Wade's road, and at an average distance of 40 yards from the Wall. As it ascends the hill only 15 feet of the width of the road lie within the field, the rest being beneath the road-side grass; but where it bends to approach the milecastle on the top of the bank, and is marked by a conspicuous ridge wholly within the field, the total width is, as elsewhere in its course, the average 20 feet. The metalling for the most part was about 14 inches in depth and shews a distinct camber, but the surface is generally in bad condition and in places has been much robbed. The kerb on the north side was generally well-marked by a line of fair-sized whin cobbles set somewhat irregularly.

Immediately west of the summit of Limestone bank the Wall, which here passes and continues for some miles underneath Wade's road, and the Vallum run so close together as barely to leave room for the military way between them. The absence of any real break in the well-preserved north mound of the Vallum, and the presence of huge whinstone blocks from the Vallum ditch lying on the north berm of the Vallum indicate that the road did not follow here the course along the berm of the Vallum, which it occasionally takes elsewhere<sup>19</sup> when difficulties prevent its

<sup>19</sup> East of Down-hill, near Cawfields milecastle and at Gilsland.

normal course; therefore trenches were cut between the Wall and the Vallum mound to search for it. These revealed the metalling of the road but unfortunately no very definite kerbs, except in one spot where two 'cavilled' freestone blocks appeared to have marked its south edge. The metalling was 14 inches deep and in one place rested on some large rough whin boulders, and shewed a width of 11 feet 6 inches. In the trench which located Carrawburgh east turret the surface of the Roman road was 2 feet 6 inches above the clay and cobble foundations of the south wall of the turret. Where the Wall and Vallum approach most closely, the distance between the south lip of the fosse and the foot of the north mound of the Vallum is not much more than 50 feet.<sup>11</sup> The two structures slightly and slowly diverge as they proceed westward. This fact, I believe, will account for Carrawburgh east turret lying 40 yards west of its normal position, where indeed there would barely be room for it. The Wall could not have been placed further north as the ground slopes away there fairly rapidly. Consequently the constriction of the space between Wall and Vallum leads it would appear (though I consider further excavations at this point necessary before feeling confident on the matter) to the narrowing of the military way to little more than half its usual width and the displacement of the turret from its normal position; and this fact seems to point to the construction of the Vallum having taken place before the laying out of the Wall, fosse and road. This tentative conclusion has further support from the three known cases where the road is for some reason compelled to cut diagonally through the north mound of the Vallum and travel for a while on the berm. To accept this conclusion, which would be unwise until further evidence is forthcoming, would mean maintaining the following

<sup>11</sup> Of this distance about 7 feet 6 inches must be allowed for the Wall, and about 20 feet for the berm between it and the fosse.



chronological sequence of construction for the frontier works—(1) forts<sup>12</sup>, (2) Vallum, (3) fosse, Wall, milecastles, turrets and road.

#### VI.—POTTERY FROM LIMESTONE BANK TURRET (plate III).

*Samian.* Portions of three decorated vessels, Dr. 37.—(i) Fig. 38 with a very uncommon type of ornamentation to which I have been unable to find any parallel. From the position in which it was found in the masonry *débris* above the rubbish of the floors, it would seem to belong to the end of the occupation of the turret, and its general character would place it in the latter half of the second century. (ii) A minute piece shewing a fragment of foliage decoration, which is not in Déchelette. (iii) A narrow rim of thin ware with good glaze with no part of the decoration preserved, but apparently an early piece. It lay at the foundation level outside the east wall. No other Samian was found except two minute pieces of Dr. 31.

*Mortaria.* Fig. 1 (d. 9")<sup>13</sup> pink, fine paste, smooth surface. This vessel has no grit in the interior. The wide flat rim is characteristic of a pre-Antonine date. Fig. 2 hard buff ware. The rim is transitional from the flanged rims of the first and second centuries to the 'hammer-heads' of the third. Several of this type occurred in a deposit at Corbridge dateable to the late second century.<sup>14</sup> This fragment was found in the masonry *débris* above the rubbish on the second floor, and probably belongs to the end of the occupation of the turret.

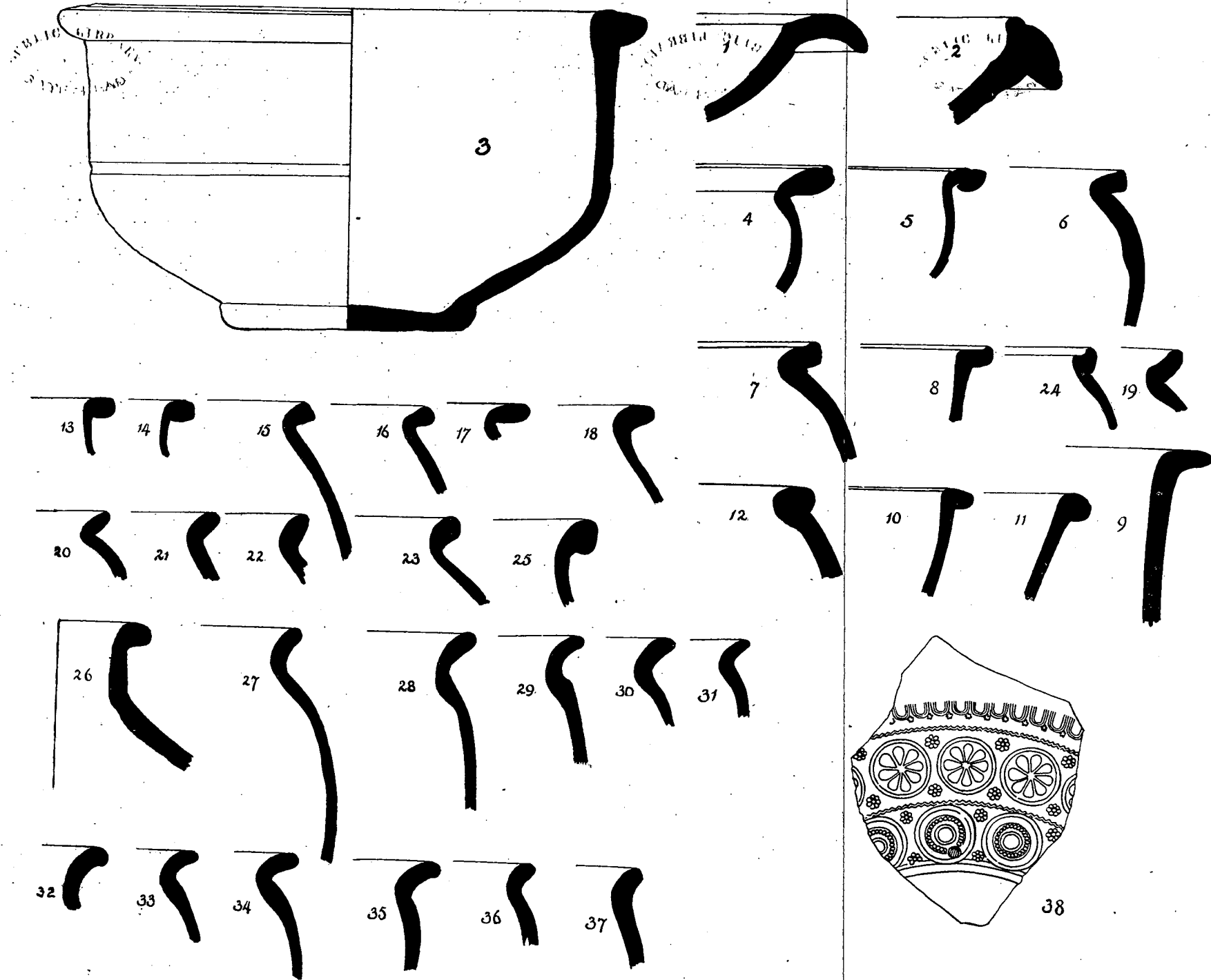
*Bowls.* Fig. 3, a complete bowl with flat, reeded rim; pinkish buff, the exterior smoked grey. It is much worn with use and has several rivet holes just below the rim. This type of vessel is common in Flavian and Trajanic times (e.g. at Newstead, Corbridge, and Gellygaer) and occurs also in the lowest deposits (i.e., period 1A) of the Wall buildings (e.g., Poltross-burn mile-castle<sup>14a</sup>), but it has nowhere been observed in post-Hadrianic levels. If it had continued in use into the reign of Antoninus Pius or even into the latest years of Hadrian examples would almost certainly have come to light in the forts on the Scottish Wall or in the rich early Antonine levels at Corbridge. It must therefore have fallen out of use about the same time as the so-called 'rustic' ware with which it is usually associated. Fig. 4, dark, blue-grey,

<sup>12</sup> In view of the fact that the Vallum has been proved to deviate from its course to pass round the south side of several of them.

<sup>13</sup> d. = diameter measured from the exterior of the rim.

<sup>14</sup> Corbridge Report, 1911 (*Arch. Ael.*, 3 ser. VIII, fig. 8, nos. 105-107, and p. 180).

<sup>14a</sup> Gibson and Simpson, 'The Milecastle at the Poltross Burn,' *Cumb. and Westmor. Trans.*, N.S., XI, p. 447.



SECTIONS OF POTTERY FROM LIMESTONE BANK TURRET.

SCALE: HALF SIZE.

1880

1880

1880

well finished, coarsish clay; fig. 5 (d.  $4\frac{3}{4}$ " ) hard coarse, buff ware. These two are varieties of the ordinary flat-rimmed bowl. Fig. 6 (d. 6") gritty, yellow clay with grey exterior. Fig. 7 (d. 6") a bowl or wide-mouthed jar of buff, coarse, hard ware. Fig. 8, dirty buff with smoked exterior. The shape and material of figs. 4-8 point to an early date. They are types which do not appear in Antonine times.

*Dishes.* Fig. 9 (d.  $6\frac{1}{2}$ " ) grey with polished surface; a common type of the second and third centuries. Fig. 10, fine yellow clay, lattice-work ornament on the side. These dishes in yellow clay appear rarely and on the line of the Wall only in period I levels. Fig. 11, of the same nature as fig. 9.

*Jars.* Figs. 12-31. Fig. 13 (d.  $6\frac{1}{2}$ " ) sandy buff-grey, fig. 14 (d.  $5\frac{1}{2}$ " ) dirty buff, and fig. 17 (d.  $4\frac{1}{2}$ " ) very hard grey ware, carefully made, are probably all rims of 'rustic' jars. Four fragments shewing 'rustic' ornament were found. Fig. 15 (d.  $5\frac{1}{2}$ " ) sandy, buff, and fig. 16 smooth soapy grey ware, have distinctly early rims. Fig. 12 (d. 8") is a curious, coarse, brick-red fragment. Fig. 18 (d.  $5\frac{1}{2}$ " ) is grey, fig. 19 (d.  $5\frac{1}{2}$ " ) grey brown, well made. Figs. 20-23 (d. —, 5",  $4\frac{1}{2}$ " ,  $4\frac{1}{2}$ " ) are all grey. Fig. 24 (d.  $4\frac{3}{4}$ " ) is of black ware, not unlike that of cooking-pots. Fig. 25 (d.  $6\frac{1}{4}$ " ) has a rough black surface, but the clay is red. Figs. 26-31 are probably somewhat later types than the above. Fig. 26 a narrow-necked jar of hard blue grey ware. Fig. 25 was probably of much the same shape. Fig. 27-31 are of the usual sandy grey ware, generally with lattice-work decoration. Two fragments of neatly moulded rim belong to the small 'rough cast' vases with moulded foot which belong to the first and second centuries.<sup>14b</sup>

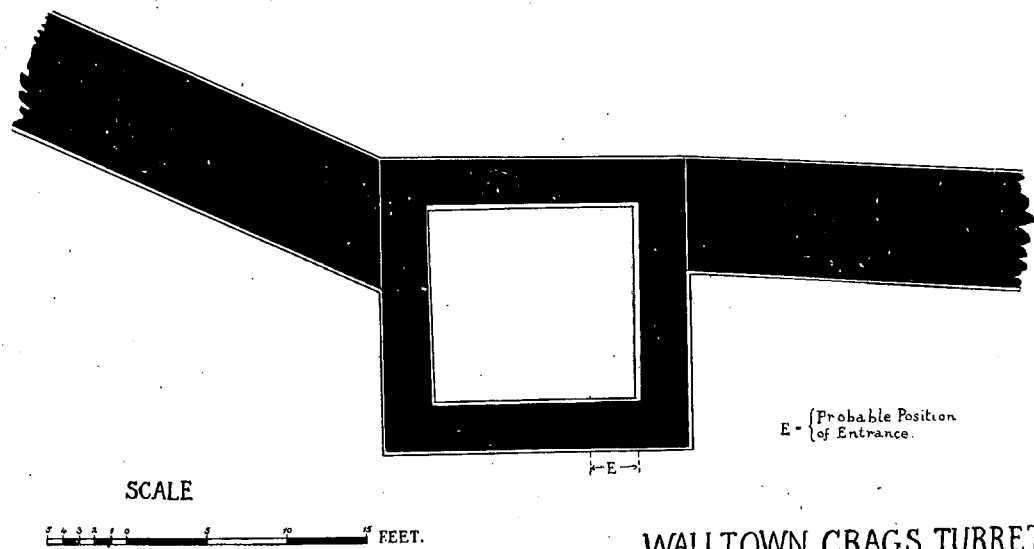
*Cooking-pots.* Figs. 32-37 all of the usual sandy, black character. Fig. 32 has an undulating line impressed in the hollow of the neck. This detail appears commonly on cooking-pots of the early part of period I in the stratified deposits on the Wall, but rarely, if at all, after the middle of the second century.

#### VII.—NOTES ON GROUND PLANS OF TURRETS SHOWN ON PLATE II.

No plan of a turret on the Roman Wall has hitherto been published, though several of these structures have been excavated and known for many years. Mr. F. G. Simpson has now (1913) published plans and reports of a number of turrets which he has recently excavated.<sup>15</sup> I have therefore thought it useful to supplement his plans by those of all the other turrets hitherto excavated; more or less full accounts of the exploration of these

<sup>14b</sup> Cf. Corbridge Report, 1911 (*Arch. Ael.*, 3 ser. VIII), fig. 6, no. 75.

<sup>15</sup> *Trans. Cumb. and Westmor. Arch. Soc.*, vol. XIII, p. 297 (1913).



WALLTOWN CRAGS TURRET.

FIG. 5.

buildings are on record, references to which are given below. I have added a table of dimensions; those of Blackcarts, Brunton and Mucklebank turrets are from my own measurements, but Mr. Simpson very kindly had Mucklebank re-measured for me and added important details by further excavation, which, by clearing the north face, determined the width of the Roman Wall and the fact that the corner which it makes at this point, is angular and not rounded. I am further indebted to him for clearing and measuring Walltown Crags turret, which has lain half uncovered and in a very ruinous condition for many years. The late Mr. John Clayton was responsible for the discovery of this turret and also of those at Blackcarts and Brunton. An account of Blackcarts is given in *Arch. Ael.*, 2 ser. vii, p. 256, and of Brunton in *Arch. Ael.*, 2 ser. ix, p. 234. Walltown Crags turret is mentioned in the description of the turret east of Carvoran which was destroyed by quarrying operations (*Arch. Ael.* 2 ser. ix, p. 234, and x, p. 57); from this account the dimensions of the latter structure given in the table below are taken. Mucklebank turret was excavated by the late Mr. J. P. Gibson, F.S.A., and a full report (but no plan) was issued in *Arch. Ael.*, 2 ser. xxiv, p. 13. Mr. Simpson's examination of Walltown Crags turret has revealed an interesting feature which does not occur in any other excavated turret. The great Wall, which meets the building at an angle on both sides, is not bonded into the turret walls as elsewhere, but makes a butt-joint on each side (plate iv, and fig. 5). The turret then must have apparently been built before the Wall as it stands now; though there is no evidence of an interval of time between the building of the two structures, nor any trace of reconstruction in the existing remains at this spot. Mr. Simpson writes: 'The facing stones of the turret walls are, as usual, smaller than those of the Great Wall adjoining. The rock surface (on which the building stands) slopes rapidly to the south, and the foundation course of the south face of

the north wall is higher than any part of the remains of the south wall. This explains the absence of any traces of an entrance. Three or four courses of foundation work have been necessary to bring the south wall up to a reasonable level for building the regular walling. All remains of floors appear to have been entirely removed.

	Brunton.	Blackcarts.	Limestone Bank.	Mucklebank.	Walltown Cragg.	Carvoran [destroyed]
Depth of recess ...	4' 8"	4' 9"	5' 0"	1' 3"	4' 5"	2' 6"
Interior—						
N. and S. walls	12' 10"	11' 7"—11' 3"	12' 8"	10' 3"—10' 0"	13' 6"—13' 2"	13' 0"
E. and W. walls	12' 0"	11' 8"—11' 3"	12' 3"	10' 1"—10' 4"	12' 6"—12' 9"	11' 10"
Average thickness of walls (excluding offset) ...	2' 10"	3' 7"	2' 10"	3' 3"	2' 9"	3' 2"
Width of doorway opening ...	3' 0"	3' 0"	3' 4"	2' 10"	?	?
Width of thickening of Great Wall	1' 5" ?	2' 4"	2' 1"	none	none	?
Length of thickening of great Wall—						
E. ...	3' 0"	13' 8" ?	14' 4"	—	—	—
W. ...	3' 4"	13' 8"	15' 5"	—	—	—
Width of great Wall at junction with turret ...	9' 3"	10' 0"	9' 7"	7' 3"	7' 2"	?
Width of great Wall beyond thickenings	7' 10"	7' 6"	7' 6"	7' 3"	7' 2"	?

#### VIII.—ROMAN FORT ON WALWICK FELL (plate 1).

South of the line of the Wall and Vallum and quite distinct from the series which guarded the course of the Stanegate,<sup>16</sup> lie a number of detached Roman forts. These, as far as surface indications go, are comparatively small structures with ramparts of

<sup>16</sup> The Stanegate forts are Chesterholm, Haltwhistle-burn, Carvoran, Throp, and most probably others at Nether Denton and Watchcross in Cumberland, and Newbrough, near Fourstones. Of the first four, excavations have given us much information. For the probable existence of each of the others there is some evidence.



*Photo by T. Hepple.*

WALLTOWN CRAGS TURRET ; N.W. JUNCTION WITH GREAT WALL.



*Photo by T. Hepple.*

E. WALL OF TURRET AND N.E. JUNCTION.



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С. М. П. П. П. П. П.

earth. No doubt they differ in date, but geographically they fall into two groups: (1) a series of five or six from Tower Tye to Grindon,<sup>17</sup> (2) another of four across the watershed from the Tipalt at Greenhead to the Irthing at Willowford<sup>18</sup>.

None of these had ever been examined and therefore I decided to excavate the two on Walwick fell. Unfortunately the one to the south-east, the larger of the two, had just been planted with young firs and thereby rendered inaccessible to the spade for many years to come. This fort and the one south of the plantation at the summit of Limestone bank were first observed and recorded by Maclauchlan<sup>19</sup> and the suggestion has been made that they were temporary works in use during the construction of the Wall. This suggestion which was *a priori* improbable owing to the small number and size of the forts, was in the case of the example excavated on Walwick fell proved entirely incorrect. This earthwork occupies a commanding position, though the Wall would obstruct the outlook to the north, and lies on a small knoll where the limestone rock is barely covered by the turf. Its outline is correctly laid down on the O.S. map (25 inches) except for the omission of the traverse in front of each gate.

## DIMENSIONS.

Length of north side	...	...	...	...	55 yards
„ south side	...	...	...	...	57 „
„ west side	...	...	...	...	60 „
„ east side	...	...	...	...	53 „
„ traverses	...	...	...	...	7 „

Average height of rampart above undisturbed soil, 2 feet; average width of gateways, 12-15 feet.

In shape nearly square with rounded corners, it has four gateways exactly in the centres of the four sides, and a traverse

<sup>17</sup> Two on Walwick fell, Brown Dikes, and two on Grindon farm. See Gibson and Simpson, 'Roman Fort at Haltwhistle-burn' (*Arch. Ael.*, 3 ser. v, p. 262).

<sup>18</sup> Glenwhelt Leazes or Black Dikes, Chapel Rigg, Crooks, Willowford.

<sup>19</sup> Maclauchlan, *Memoir*, p. 33, footnote.

at a distance of 10 yards in front of each gateway. The internal area is roughly 3500 square yards, which is just over two-thirds of an acre.

The ramparts are composed of soil and the yellow clay, which overlies in a narrow layer the limestone rock on Walwick fell. There was no trace of turves in the material, which in places (particularly at the corners) contained large whin boulders, and had spread so much that it was impossible to ascertain its original width or height; the latter could hardly have been more than 4 or 5 feet. Owing to the proximity of the natural rock to the surface, no ditch existed except on the south-west, where a deposit of yellow clay lies above the limestone. A cut just south of the west gateway showed a ditch 2 feet deep and about 6 feet in width.

Trenching in the interior of the fort revealed only a number of irregular flagged areas, which were found especially in the north-eastern quarter. These were mostly quadrilateral, some few roughly circular, and one was a semicircle. The small flags with which they were paved were mainly of freestone, laid on a few inches of clean soil above the natural limestone. In several cases a number of large whin blocks had been set regularly along one or more of the sides of these flagged areas, which varied in size; but three well defined examples measured 9 feet by 5 feet, 4 feet by 6 feet, and 7 feet by 8 feet 6 inches.

The distribution of these areas was irregular and none was met with in the south-west quarter. In no case did the floors shew signs of fire, and no hearths were discovered. The few potsherds found lay chiefly by the side of the fragmentary floors or came from the material of the rampart.

It would seem highly probable that these paved areas formed the floors of tents or huts. If the latter, the walls must have been composed of turf, as the rock would not allow of post-holes for timberwork.

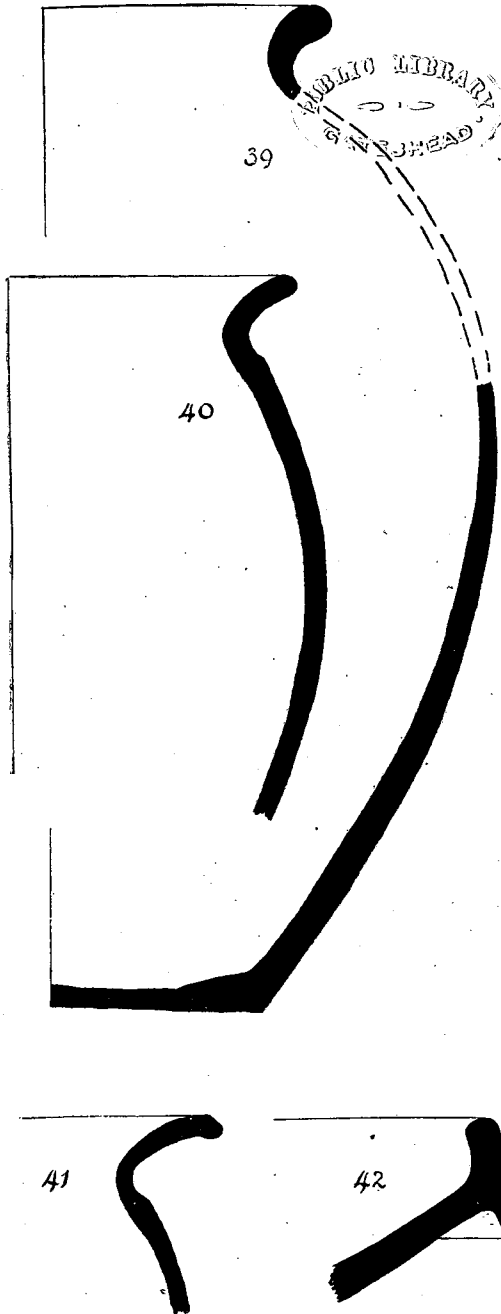


FIG. 6.—SECTIONS OF POTTERY FROM WALWICK FELL FORT.

(Scale: half size.)

No coins or objects of metal were turned up; but the pottery, though scanty, was sufficiently distinctive to give a rough date for the period of construction, which falls somewhere in the third century A.D., and probably in the second half of that century. That the occupation was short is indicated by the slight nature of the defences, the small amount of pottery fragments and the absence of bones and other refuse.

More of these forts must be carefully excavated before it will be possible even to suggest their purpose or precise date.

#### IX.—THE POTTERY.

Fig. 39 a jar of hard, fine blue-grey ware, characteristic of the third and fourth centuries. Similar ware occurred in the late fourth century fort at Huntcliff near Saltburn,<sup>20</sup> and has been found in the later levels of turrets and milecastles on the Wall. Fig. 41 shews the rim of a cooking-pot, a number of fragments of which were found near the south-east corner of the fort. The wide rim strongly bent back is characteristic of the later third century cooking-pots. Fig. 40 is a cooking-pot found in the material of the rampart just above the original surface, south of the west gateway. With figs. 40 and 41 compare two rims from Appletree turret belonging to period II, which covers roughly the third century, shewn in *Trans. Cumb. and West. Arch. Soc.*, N.S., vol. XIII, plate XVII, figs. 91, 92. Fig. 42 a portion of a characteristic 'hammer-head' *mortarium*, of good, hard, buff-white clay with black grit. This also was found in the soil of the rampart at the north-east corner, together with pieces of a coarse, thin, grey jar, some fragments of cooking-pots shewing the same rim-contours as figs. 40 and 41, and a portion of a lid of grey 'Castor'-like ware with 'engine-turning' decoration.

<sup>20</sup> *Journal of Roman Studies*, vol. II, part 2.