

VI.—NOTES ON HADRIAN'S FIRST AND SECOND BOUNDARIES IN BRITAIN.

BY PARKER BREWIS, M.A., F.S.A., A VICE-PRESIDENT OF THE SOCIETY.

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I.—THE DYKE AND THE WALL.

The Roman general Agricola intended to conquer the whole of Britain, and by the year A.D. 79 he had advanced as far north as Solway. He invaded the lowlands of Caledonia, spreading over the area a network of forts, calculated to keep it down, whilst he attempted to conquer the highlands. He had penetrated north of Perth when he was recalled to Rome without having accomplished his task. Towards the end of Trajan's reign there was a general rising of the tribes of the north who swept the Romans out of Caledonia.

In the year A.D. 117 the emperor Hadrian ascended the throne. One of his first official acts was to abandon the policy of conquest. Believing that the empire needed consolidating rather than expanding he determined to give it well marked boundaries which hitherto it had imperfectly possessed.¹ The first step was to choose the most suitable line—it should be short yet not easily outflanked, and it must be a line along which there was good lateral communication to allow of quick concentration of troops at a threatened point. No line in Britain so well meets these requirements as that of Tyne and Solway, hence it was chosen as Hadrian's *first boundary in Britain*.

¹ Pelham, *Essays on Roman History*, 162.

Originally the frontier was defended by a series of forts, linked together by a military road² and marked merely by a non-military, flat-bottomed ditch dug across the country to indicate the civil boundary of the Roman empire. This method of demarcating the frontier was found to be inefficient; for the ditch was not a sufficient material obstacle to raiders, who did not respect the Roman boundary; it was sixty-six miles long,³ and every yard had to be guarded night and day, otherwise a few determined raiders might wait the passing of a patrol and steal over the boundary. It took too many men as a guard, and was therefore superseded by *Hadrian's second boundary—The Wall*.⁴

The above introductory sketch of the conquest of northern England is an attempt to reconstruct the course of events by combining the vague statements of Tacitus in his *Life of Agricola* with an epitome of such archaeological evidence as is available. It therefore includes hypotheses as well as history.

Hadrian's First Boundary. The Dyke.

Hadrian's first boundary in Britain is commonly, though erroneously, known as the Vallum. The word *vallum* originally meant a stockade, but in military works the stockade was combined with an earthen rampart. By the second century A.D. the rampart itself came to be termed *vallum*. The so-called Vallum has no right to the name, for its essential feature is a non-military, flat-bottomed ditch, the upcast from which forms a mound or mounds on its northern and southern sides. It was cut to mark the civil boundary of the Roman empire. The error in the name arose through Bede, who was misled

² *The military way* close behind the Wall is later.

³ The first boundary terminated at Newcastle on the east and Burgh Marsh on the west.

⁴ The decision to substitute a wall for the dyke was probably a result of Hadrian's visit to Britain in the year 122.

by Gildas and attributed the dyke to Severus and the stone wall to the Britons. It is now believed that both the dyke⁵ and the Wall were the work of Hadrian.

The opinion that the so-called vallum was a *vallum* or defensive work is not now accepted, therefore it would be well if that word were no longer used to designate Hadrian's first boundary in Britain. Others have made faint protests against the use of the term *vallum* for this work, but have usually condoned the offence by adding that it is now too late to rectify the error. The remedy is in our own hands. If the editors of this and kindred societies would delete this word *vallum*, whenever wrongly used, others would soon follow their example. Term this work *Hadrian's Dyke* and the second boundary *Hadrian's Wall*.

It is remarkable how long the use of the word *vallum* has survived, despite the fact that it is not correct. Yet this is no more remarkable than that the published sections of this boundary are usually inaccurate and misleading. The mounds are represented much too large in proportion to the ditch, and the fact that they are but the upcast from the ditch,⁶ and should therefore in

⁵ The exact date of the dyke has not yet been ascertained. It deviates from its course to avoid certain Hadrianic forts (C. & W. T., N.S., xxii, p. 366), but it may be argued that this merely proves that, when it was made, the sites of these forts were occupied, possibly by forts earlier than those at present existing. The dyke is earlier than the Wall, for the latter changes its course to avoid the dyke. That the dyke is Hadrian's first boundary in Britain see R. G. Collingwood's *Hadrian's Wall in History*, N.S., vol. x, No. 39, p. 195; *The Roman Frontier in Britain, Antiquity*, March, 1927, p. 21. Messrs. Simpson and Shaw term the dyke "The first expression of Hadrian's idea of finally fixed frontiers" (C. & W., N.S., xxii, p. 390).

⁶ "The Vallum consists of a wide, flat-bottomed ditch, with mounds of earth thrown out on either side, the upcast being in the reverse order to the layers of various soil underneath the original surface, indicating that the mounds were formed out of the contents of the ditch, and were not built of soil brought from a distance. Everything points to the ditch having been the

their total sectional area equal that of the ditch,⁷ is generally overlooked. How could these three mounds, C. A. and B., plate XL, fig. 4, all come out of the ditch D.?

Bruce recognized that the ditch would not produce enough material to form mounds as large as are usually shown in the stereotyped sections. He states: "The question will naturally occur to the wanderer by the Wall—whence were the materials obtained for constructing the mounds of the Vallum?"⁸ He does not question the accuracy of the sections, but suggests that material was brought from elsewhere to make the mounds. When Bruce wrote this he was not wandering by the Wall; his footnote shows that he was referring to Horsley's sections in *Britannia Romana*, 1732 (plate XL, fig. 2). These not being drawn to scale are the source of the trouble. Perhaps because he was one of those who called the work a *vallum*, and thought that the mounds, and not the ditch, were the principal consideration, he exaggerated the size of the mounds out of all proportion to the ditch. It is true that at the point where the sections are taken (Carraw), the military way is on the north mound, but it is a small addition to the sectional area. One has but to compare Horsley's section (plate XL, fig. 2) with the actual section at this point (Carraw), taken by T. H. Hodgson of Newby Grange (plate XL, fig. 3⁹) to see how inaccurate Horsley's sections are. As the width of the ditch varies from 4 to 40 feet,¹⁰ and the mounds vary

chief consideration in the minds of the makers, the mounds being a means of disposing of the upcast." *Transactions of the Cumberland and Westmorland Soc.*, N.S., vol. xxi, p. 260.

⁷ That is in a normal section. In exceptional circumstances, as for example at White Moss, the section is varied. *Cumberland and Westmorland Trans.*, N.S., vol. xxii, pp. 362-5.

⁸ *The Roman Wall*, 3rd edition, p. 58.

⁹ *Cumberland and Westmorland Trans.*, O.S., vol. xiv, Plate I, No. 15.

¹⁰ "The ditch of the Vallum varies in width at the present surface from 4 or 5 feet at White Moss and Bleatarn to 40 feet

in number, position and dimension,¹¹ it is difficult to give a typical section, yet the diagrams of plates xxxix and xl may help to make clear the relative proportions of the ditch and mounds of a normal section.

Plate xxxix, fig. 1. Let A. B. be the original ground surface. (In reality it is by no means universally level; sometimes the northern side is higher than the southern and sometimes *vice versa*.) If a continuous ditch be dug with a cross section E. F. H. the upcast thrown out on either side of it would make two continuous mounds, one on the north, the other on the south side of the ditch, with sections C. D. E. and H. I. J. The mound C. D. E. being equal to E. G. F., i.e. half the ditch. The other mound H. I. J. would equal F. G. H. the other half of the ditch.

But if the mounds were built on the lip of the ditch they would tend to silt back into the ditch—hence they were each set back a little, as in plate xxxix, fig. II, leaving a berm at E. F. and H. J.; moreover the ditch was not V shaped, but flat bottomed as in plate xxxix, fig. III. Therefore the upcast would only provide earth sufficient to form mounds C. D. E. F. and L. M. N. O.; the portions of the ditch not dug, viz. H. K. I. and I. K. J., would equal the portions of the mound not built, viz. D. G. E. and M. P. N. But as earth does not retain a sharp angle these mounds would assume a rounded form, as shown in plate xl, fig. 1, where the mound at A. is the result of the Romans having cleared out the ditch and thrown up the silt into a marginal mound. This marginal mound is frequently represented much too large in pro-

and 43 feet at Bradley Hall." *Cumberland and Westmorland Trans.*, O.S., vol. xiv, p. 409. For dimensions of the dyke in Northumberland, *ibid.*, pp. 408-12. For Cumberland, *ibid.*; pp. 244-51.

¹¹ "The north mound varies in width from 15 feet at Gilsland and 17 feet at White Moss to 43 feet at Appletree and 50 feet at Carraw." *Cumberland and Westmorland Trans.*, O.S., vol. xiv, p. 409.

portion to the other mounds,¹² and they, again, are represented as too large in proportion to the ditch, so that the latter is insufficient in section to provide material to make all the mounds, with the result that the stereotyped section resembles plate XL, fig. IV. Plate XL, fig. I, should be compared with the sections usually published, and especially with Horsley's section in *Britannia Romana*, p. 158, reproduced in plate XL, fig. II. Accurate sections have been made; for example, F. G. Simpson's model, illustrated in the *Cumberland and Westmorland Transactions*, N.S., vol. xxii, and those by T. H. Hodgson of Newby Grange, published in the *Cumberland and Westmorland Transactions*, 1896-7, O.S., vol. xiv, from which fig. III, plate XL, is taken, and those reproduced in plate XLI taken from a framed copy hanging on the staircase at the Black Gate. They were surveyed by Mr. E. Watson for the late Thomas Hodgkin in 1882. It is believed that these sections have not hitherto been published.

II.—THE NAMES OF THE FORTS.

The use of Latin names for the forts on the line of the Wall is undesirable, their exact form is not always determined, whereas the English names are fixed and well known.

Birdoswald has long been known as Amboglanna, the name as preserved in the manuscripts of the *Notitia*. It is so spelt in the latest edition of Bruce, and on most maps, but the Ordnance Survey *Map of Roman Britain* has Camboglanna. It may be said "What does it matter to

¹² The marginal mound is absent for considerable distances in several sectors; when present it varies continually in size. In many places the marginal mound is increased by the earth of the removed "causeways." *Cumberland and Westmorland Trans.*, N.S., vol. xxii, p. 352 *et seq.* Horsley thought that this marginal mound was Hadrian's wall; he therefore termed it "Hadrian's principal agger."

a letter?" But when it is an initial letter it is important, for in the index of the Ordnance Survey *Map of Roman Britain*, one looks in vain under A for a name there beginning with C. The C is probably taken from the Rudge cup (plate XLII, fig. 1) which has Camboglans. If the *Notitia* reading is rejected, there is no evidence for —*glanna*.

In the Victorian age, the fort at Housesteads was called Borcovicus, and it is usually so named on the maps. Gordon's equation Housesteads=Borcovicus was based upon the *Notitia*, Occ. XL, 40, "Trib. Coh. I. Tungrorum Borcovicio," plus inscriptions by the first cohort of the Tungrians found at Housesteads. Hübner suggested Borcovicium was the correct form of that name, and it is so spelt on the Ordnance Survey *Map of Roman Britain*. No inscription, however, has been found at Housesteads in which the name Borcovicium occurs.

The Ravenna list is a broken reed, but it has Velurion. In late Latin B frequently means V, and on account of an inscription found at Housesteads¹³ it has been suggested that the Roman name of Housesteads was Ver(covicium).

III.—THE NORTH GATEWAYS AT HOUSESTEADS FORT AND MILE CASTLE.

The north gateway at Housesteads fort is often regarded as a glaring example of the influence of Roman red tape, because of the height of the threshold above the present ground level to the north. It is said to have been unusable, being built because the standard pattern of a Roman fort required a gateway in that position. The facts are that as originally constructed, this and all the gateways at Housesteads were double gateways, but soon

¹³ R. G. Collingwood's *Guide to Chesters Museum*, 1926, No. 231. See also *Arch. Ael.*, N.S., vol. x, p. 151.

after the erection of the fort, one half of each was built up, reducing them to single gateways. At the north gateway at Housesteads it was the eastern portal that was built up, but the western portal, as well as the unbuilt up portals of the remaining gateways, were all long in use.

Bruce, referring to Housesteads, states that "The north gateway, which has been constructed on the same plan as the west, is an exceedingly grand piece of masonry. The blocks of which it is composed have been so accurately laid that to this day they exhibit no sign of parting or displacement. Its eastern portal has been walled up at some period before the abandonment of the station. . . . The angles of the basement stones of the western aperture are much worn by the tread, apparently, of the feet of passengers. The guard chambers are nearly entire. When this gateway was discovered, a road was found leading up to it by a somewhat steep gradient; the sloping bank was removed to display the masonry of the foundation."¹⁴ This statement sufficiently covers the facts showing: first, that there was a ramp up to this gateway; secondly, that the gateway was long in use and much worn.¹⁵ Though Bruce thought that this wear was caused by the feet of pedestrians—it was actually the coming and going of wheeled traffic that cut the corners and rounded the angles of the Roman gateways. Indeed the ruts in the sill of this gateway were visible when it was first excavated, and are shown in a picture by Henry Burdon Richardson, now No. 263 in the Laing Art Gallery. This picture, plate XLIII, bears an inscription "The North Gateway, Housesteads. The mass of rubbish on the right, which honest Walter Rutherford (now no more) is removing, shows the extent to which the whole of this piece of masonry was covered up."

Plate XLIV, fig. II, shows the gateway from the north.

¹⁴ *Roman Wall*, 3rd edition, 1867, p. 183.

¹⁵ "The extent to which some of the stones in the lowest course of the gateway have been worn, shows that it was much frequented." *Pro. Soc. Ant. N/C.*, vol. I, p. 256.

The top of the 5 feet lath is resting against one of the stones with the rounded angles, at the threshold level, but loose stones have been piled upon the ruts.

It was John Clayton's enthusiastic admiration for the massive masonry with which the Romans faced the scarp of this gateway, that led him to remove the ramp so that the masonry might remain visible, thus causing the misunderstanding that the gate was an example of Roman red tape, unused and unusable.

A similar statement has been made as to the uselessness of the north gateway of Housesteads mile-castle.

It has been said that these gateways were built because they were in the plan, not because they were needed. Yet the very fact that the gateway was merely reduced in width, and not entirely built up, indicates that it was used. One essential of the Wall was numerous gateways to facilitate the passage of the barrier by the Roman troops.

IV.—THE GAUGE OF ROMAN WHEELTRACKS ON THE THRESHOLDS OF THE GATEWAYS OF THE FORTS ON THE WALL.

On the various thresholds of these gateways are still to be seen ruts worn by the wheels of the Roman transport vehicles. At Housesteads east gateway north portal, the gauge is 4 feet 8½ inches, plate XLII, fig. II. A story is current that George Stephenson measured these ruts and made it the gauge of his first colliery line, whence it has become the gauge of the British railways. This seems, however, to be a fairy story, there being no record of it in the time of Stephenson. Stephenson's first locomotives were made for wagon-ways already in existence and, therefore, he did not fix the gauge. Moreover 4 feet 8½ inches is a prehistoric cart gauge and is the wheel track of the fourth century B.C. at Syracuse and elsewhere.¹⁶

The ruts in the gateways of Chesters are said to have

¹⁶ *Antiquity*, vol. iii, No. 9, p. 96.

a gauge of 4 feet $6\frac{1}{2}$ inches, the same as the gauge of wheelmarks in the streets of Pompeii.¹⁷ The gauge of the ruts over the threshold of the east gate of Chesters headquarters is 3 feet $8\frac{1}{2}$ inches. The gauge of the ruts at the east postern of Rudchester is 5 feet 3 inches.¹⁸

The solution of this variation of gauge seems to be that the two latter examples of ruts were cut by hand carts, each cart belonging to its own fort and used for bringing in provisions from the annex or civil settlement and taking supplies to the milecastles.

V.—WALWICK HILL.

The Newcastle and Carlisle turnpike road was made in the year 1751.¹⁹ For the first thirty miles west of Newcastle the Wall was pillaged for stone to make this road, and for most of this distance it is actually on the site of the Wall. In many places the foundations of the Wall are left intact to form a portion of the roadway—for example, where the road ascends the west bank of the North Tyne valley at Walwick. Referring to this Bruce states²⁰ “the facing stones of the wall may often be traced for a considerable space together.” He also reproduced a sketch by Fairholt, and states that he was fortunate in seeing these traces under very favourable circumstances. The year 1928 was also favourable for seeing the remains of the Wall at Walwick, and the photograph, plate XLV, was taken on September 7th, 1928, from a standpoint a little below the blacksmith's shop, and looking west, i.e. up the hill. A 5 feet lath is lying upon the Wall, which is here 7 feet 7 inches wide. Upon digging in the grass at the south edge of the road, it was found that only one course of the facing stones of the Wall is left. It is 9 inches deep and bedded in clay upon a rough rubble

¹⁷ *Hadrian's Wall*, Jessie Mothersole, p. 94.

¹⁸ *Arch. Ael.*, 4th series, vol. i, p. 99.

¹⁹ *Pro. Soc. Ant. N/C.*, 4th series, vol. i, p. 316.

²⁰ *Roman Wall*, 3rd edition, 1867, p. 165.

foundation set in clay and edged with stones larger than those in the interior of the foundation, and extends about 2 feet 2 inches beyond the south edge of the Wall. Therefore, allowing 3 inches for the offset of the footing at the north face of the Wall, the width of the foundation is 10 feet, and this is another instance of the narrow wall upon the wide foundation. See *Arch. Ael.*, 4th series, vol. iv, pp. 109-121, and *Proc. Soc. Antiq. Newc.*, 4th series, vol. iii, pp. 223-4, and *C. and W. Trans.*, N.S., vol. xxviii, p. 384.

VI.—WALLSEND.

Apparently Hadrian's second boundary, the Wall, originally terminated at both its east and west ends at the same places as did his first boundary, the dyke. Newcastle on the east and Burgh Marsh on the west. The first boundary, the dyke, being superseded by the second, was never extended at either end, whereas the second boundary, the Wall, was subsequently extended at both ends. At the west end it was extended to Bowness, doubtless to prevent the boundary being outflanked by the Caledonians crossing Solway Firth. Indeed for the same reason the line, though not the Wall, was continued by a series of Roman forts running down the Cumberland coast. Recent investigations suggest that there was a similar extension of the east end, i.e. that the Wall originally terminating at Newcastle was subsequently carried three and a half miles eastward to Wallsend, and the fort at the Lawe, South Shields, though not actually upon the line of the Wall, should be considered as essentially a part of that system.²¹

The reason for this extension appears to be the winding of the river Tyne. East of Newcastle it bends south,

²¹ The forts at Wallsend and South Shields may either or both be pre-Wall.

then due north, the high banks obstructing the view down the river, a serious objection in the days of pirates. By carrying the Wall three and a half miles east to Wallsend this difficulty was overcome, for from the fort at Wallsend there was an extensive view eastward, down a long reach of the river. Plate XLIV, fig. 1.

Wallsend is about four miles from the mouth of Tyne, where on the south side was a Roman fort on the Lawe, then an island. In the event of a hostile fleet being observed in the offing, the garrison at the Lawe could quickly communicate with Wallsend, and thence with the garrison of the Wall.²² The Romans naturally built the main stretch of the Wall first, making it as short as seemed adequate for closing the frontier quickly. They therefore brought the east end down to a point where the estuary of the river practically becomes an arm of the sea, the exact point being determined by the position of the fort covering their bridge across the Tyne. It was sufficiently distant from the river mouth to allow of timely warning of sea raids. The foresight of the Romans in selecting similar positions for their bridges is demonstrated by the manner in which cities have grown up round about them. Rome itself and London, each in turn have become the capital of the world and, like Newcastle, each owes much of its greatness to its position at the lowest crossing of a considerable river. Moreover Tiber, Thames and Tyne have not been bridged at points materially lower than those chosen by the Romans.

²² J. C. Bruce, *Arch. Ael.*, 2nd series, vol. x, pp. 224-5.

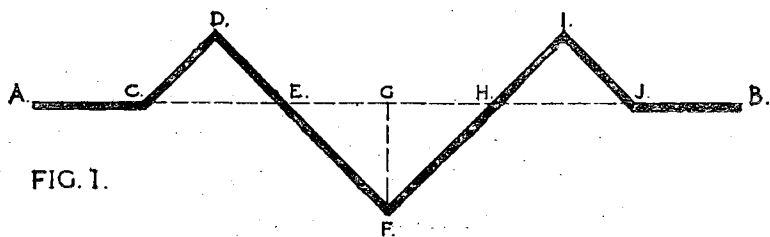


FIG. I.

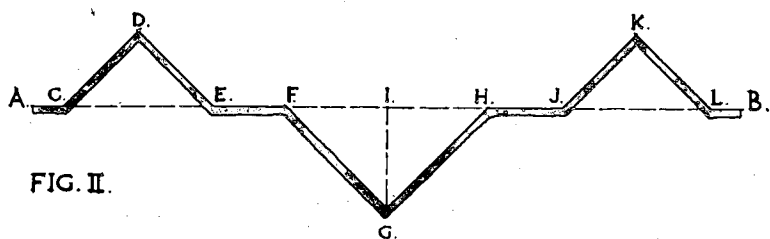


FIG. II.

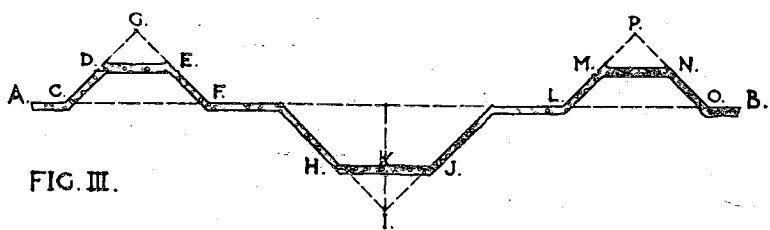


FIG. III.



DIAGRAMS OF THE DYKE.



FIG. I.

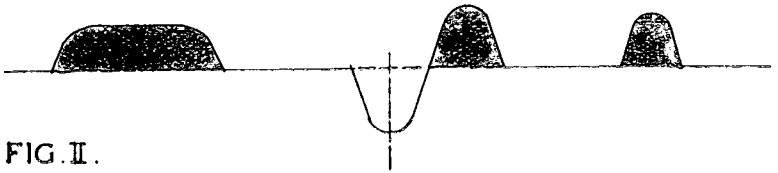


FIG. II.

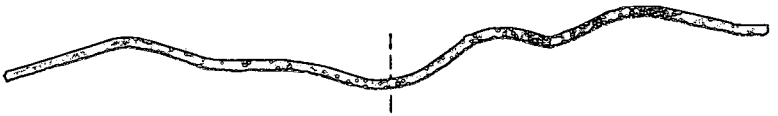


FIG. III.

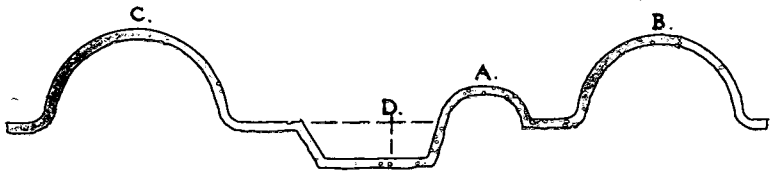


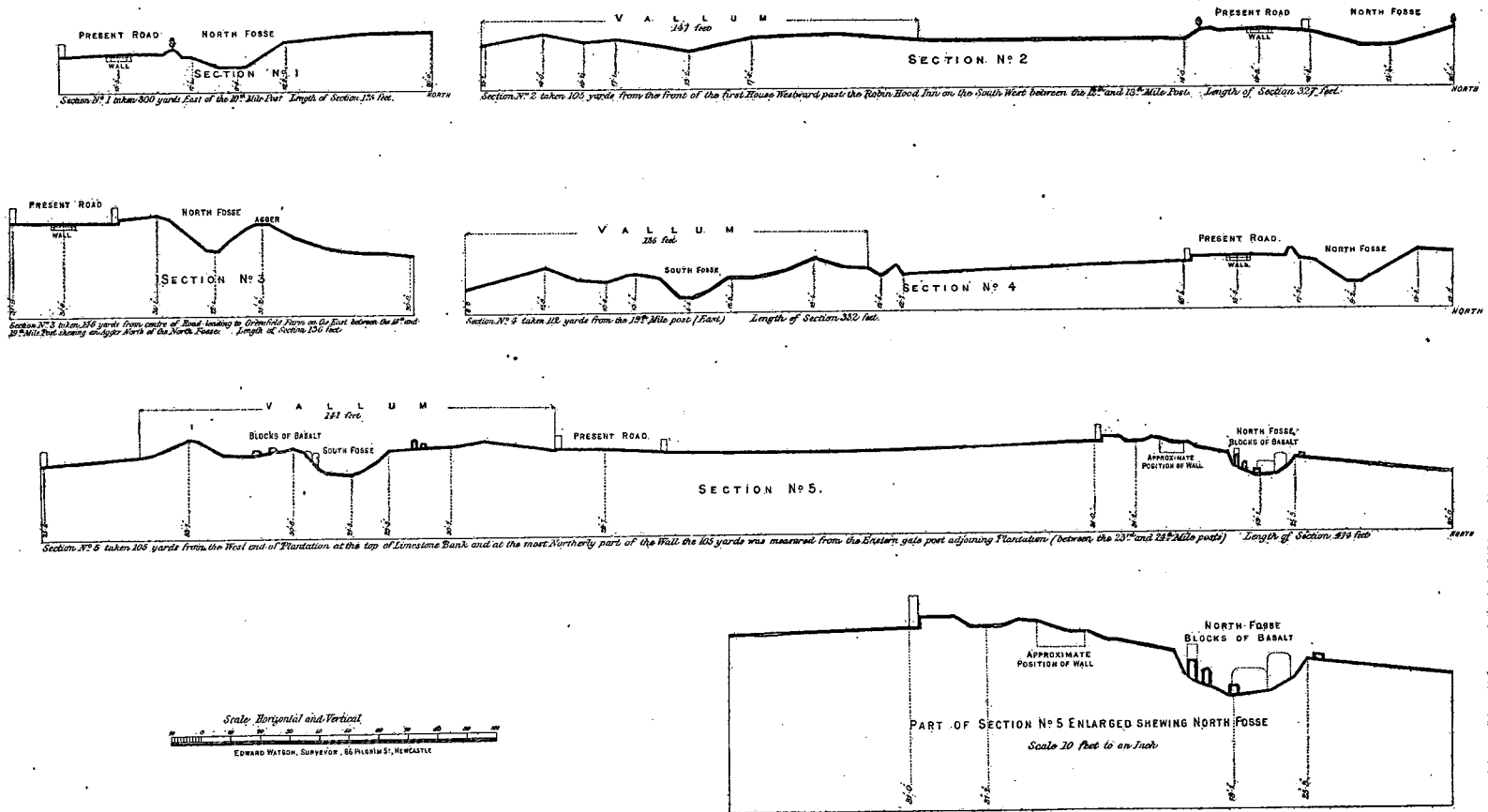
FIG. IV.



DIAGRAMS OF THE DYKE.

SECTIONS TAKEN ACROSS THE LINE OF THE ROMAN WALL AND VALLUM
BETWEEN NEWCASTLE UPON TYNE AND HOUSESTEADS — SEPTEMBER, 1882.

for T. Hodgkin Esq., Newcastle upon Tyne







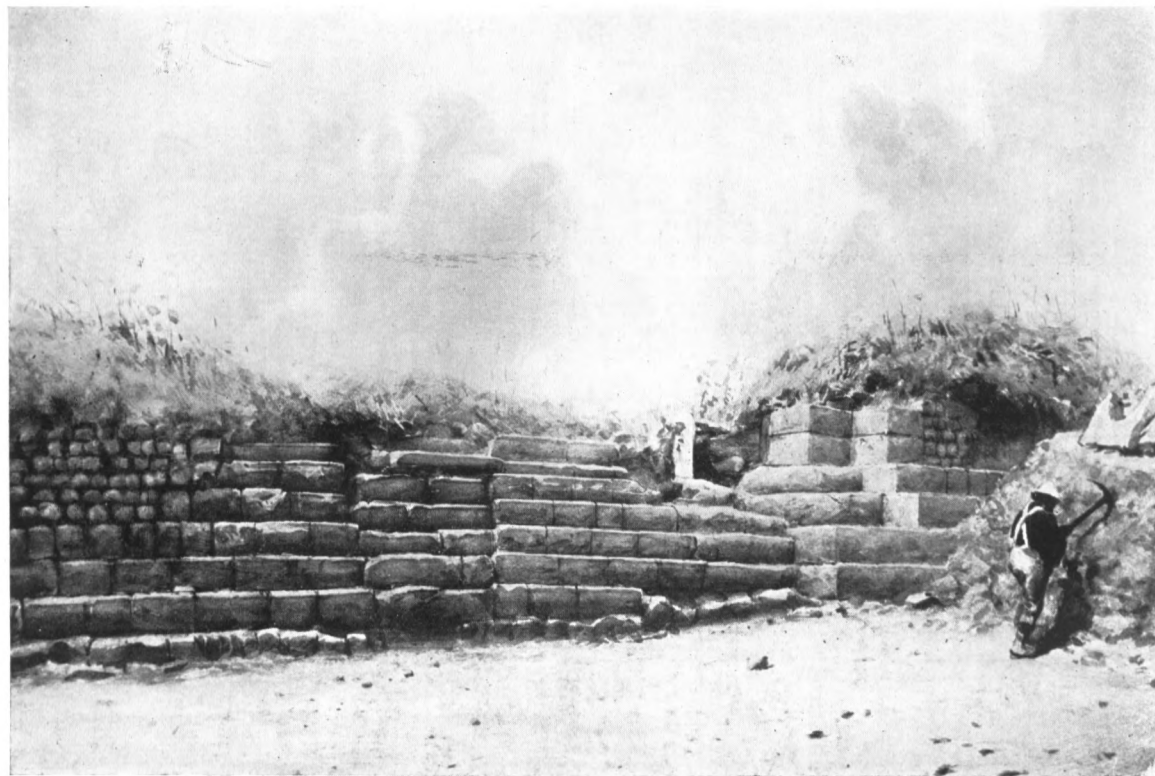
THE RUDGE CUP.

FIG. I.

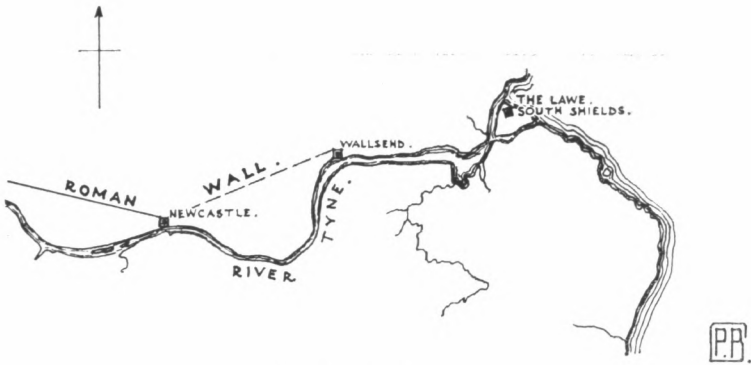


EAST GATEWAY, HOUSESTEADS.

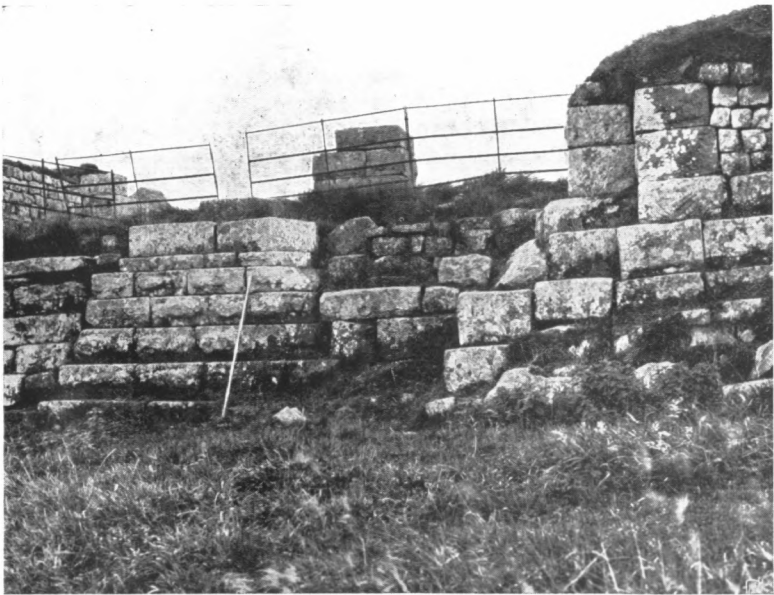
FIG. II.



NORTH GATEWAY, HOUSESTEADS.
FROM A PAINTING BY H. B. RICHARDSON.



MAP OF LOWER TYNE.
FIG. I.



NORTH GATEWAY, HOUSESTEADS.
FIG. II.



FOUNDATION OF ROMAN WALL ON WALWICK HILL.