



ROMAN REMAINS FOUND IN BRIDGE ST. CHESTER.
General View, looking towards Bridge Street, showing Columns

The Roman Remains of Chester,

WITH A PARTICULAR DESCRIPTION OF THOSE DISCOVERED

IN BRIDGE STREET, IN JULY, 1863.*

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AT the very onset of my paper, it is a duty I owe the Society, to explain in a few words, my position as a lecturer in this instance. Most of my brother members are aware of the highly important discoveries of Roman remains in Bridge-street, which took place in the summer of the year 1863,—some of the grandest that have ever been found in Chester, with regard to both their extent and character; and important to us as archaeologists, on account of the essential portions of them, having been found in the original position in which they were placed more than fourteen centuries ago.

As a member of the “Chester Archaeological Society,” I was requested to take notes of the respective discoveries, with the ultimate view of their forming the basis of a Paper, to be read at some future period before the Society. To this I unwillingly assented, feeling that there were members who had much more experience than I had had upon this class of antiquities, and who could better explain the disinterred remains: I regret my assent the more now, because the discovery has excited a very large amount of interest in the archaeological world, through a paper which was read before the Society of Antiquaries in January last, by Mr. W. Tite, M.P., which I believe contains important inaccuracies, and to which I shall have to refer occasionally in the course of my remarks.

* This Paper formed the matter of two Lectures delivered at Monthly Meetings of the Chester Archaeological Society, in 1864.

The plan I purpose adopting is, to give as an introduction, a brief historical sketch of the causes that led the Romans to select the present site of Chester, as one of their most important military posts; followed by a few remarks upon the 20th Legion settled here;—and then to give a general description of the remains of the Roman structures so recently discovered. As the subject of Roman buildings and their local peculiarities has not hitherto been brought under the special notice of this Society, I have been requested to take advantage of the present opportunity, and to describe, more fully than would otherwise have been desirable, all the structural details,—contrasting them with remains of the same great people found in other parts of England, and on the Continent:—and to conclude with an enquiry into the probable character, dimensions, and uses of the original buildings.*

In commenting upon these Roman remains we are compelled to go back a few years in the tide of time, so as to understand *how* and *why* it was, that the Romans founded a city *here*. It is as conventional to commence English history with the landing of Julius Cæsar in 50 B.C., as it is for nursery tales to open with “once upon a time,—we will, however, take as our starting point about a century afterwards, at the time when Ostorius Scapula defeated Caractacus and his forces in Shropshire, and waged a predatory warfare with the local tribes of North and South Wales. Up to this time we have no evidence, nor is

* It was at first intended to have entered into the questions of the causes which led to the destruction of these edifices; of the probable period of such taking place; and whether their discovery threw any light upon the origin of the formation of those well-known Chester peculiarities, the Rows, which have been such a puzzle to antiquaries. But the great length of the present paper, owing to the causes above stated, has compelled the enquiry into these matters to be deferred to some future occasion. It may, however, here be noted, that the usual explanation of the origin of the Rows is thus recorded in Hemingway's *History of Chester*, (Vol. 1. p. 393.) “It has already been assumed, as an undeniable fact, that the streets and Rows were originally on a level; and if there be not equal certainty, there is good reason to believe, that the first dwellings of the Romans occupied precisely the same site as the houses and shops in the Rows now do, with the ballustrades or openings in front of them.” This explanation, however, cannot now be accepted as satisfactory, as the recent discoveries in Bridge-street, described in the following pages, have for almost the first time afforded an opportunity of ascertaining the ground level of the Roman buildings (*vide* “section” attached to “ground plan”), and which has been corroborated by some remains discovered on the opposite side of the same street, the levels of which were taken at the time by Mr James Harrison. These prove that the Roman ground level was considerably *below* that of the present Rows. There are other reasons for believing that their construction was of a much later date, but as a paper on this subject is being prepared for the Society, further notice is not necessary here.

there any reason to believe, that the Romans had penetrated as far as Chester, nor that they did so until the time of Suetonius Paulinus, A.D. 58. That astute general soon discovered that the great power, which incited the Britons so stubbornly to resist the Roman arms, was that of the Druids, and that their head-quarters in Britain was *Mona*, the present Isle of Anglesey—paralleled, in the case of Gaul, by the Channel Islands. Suetonius resolved to attack this hotbed of Druidism, and carried out his design in the year 60 A.D., when it is probable that the Romans for the first time passed over, or near to, the present site of Chester. He had to hurry back with his army, on account of the great Boadicean revolt, so that beyond its occupancy as a temporary camp, the site of Chester was still unoccupied ground.

Eighteen years afterwards, there arrived in Britain, as its governor, the illustrious Julius Agricola. It was by no means his first appearance in the island; he had commenced his military life under Suetonius Paulinus, and under Petilius Cerealis, had had his full share of fighting honors, as commander of the 20th Legion, the one that subsequently performed such an important part in the early history of Chester. He alone, of all the Roman generals in Britain, appears to have understood and practised the most effectual manner of subjugating the fierce and stubborn islanders. He not only conquered tribes, but he secured his conquests, by leaving garrisons in the conquered district; by making roads, so that his forces could pass rapidly from one spot to another, &c.; and in the end he firmly established the Roman rule in Britain, partly by these means, and partly by teaching the natives to copy the Romans in their dress, buildings, manners and customs, and as Tacitus describes, "he led them to adopt the pursuits of peace and the refinements of the then civilisation."

Was Chester a British or Celtic town before the Roman period? I need not refer to any of the numerous fables of the early chroniclers, but at once make a quotation from *the* great Cheshire historian, Dr. Ormerod, who, in his 1st vol. (p. xxiii) states "it must be allowed that there are very strong circumstances of general probability of its existence *before the Roman invasion*," appearing to base his opinion upon the great eligibility of the site. This was published in 1819:—during the 45 years which have elapsed since then, the study of Archaeology, more especially of the British and prehistoric period generally, has been pursued with great vigor, and engaged the especial attention of some of our best Antiquaries. It has been ascertained, that wherever the primeval inhabitants dwelt, they left their marks in the form of earthworks, funeral remains, &c.; of none of which we have any record as having been discovered in the immediate vicinity of

Chester.* Further than this, all modern researches prove the aboriginal inhabitants to have been

"An iron race,

Foes to the gentler genius of the plain;"

and, instead of dwelling on the lowlands, to have occupied the tops and slopes of hills. It is scarcely probable that the site of this city was occupied by them, when we reflect upon the position of the Peckforton and Runcorn hills, and the successive ranges of mountains in Wales—places which we know to have been occupied by the Britons. This fact has been proved by the researches of many recent Antiquaries, among whom may be mentioned with great honor, our worthy chief secretary, Mr. Wynne Ffoulkes; whilst in the immediate site of Chester no traces of the aboriginal inhabitants have been discovered. The Rev. W. H. Massie,† than whom no one was better able to form an opinion on the subject, believed that "Chester was essentially a Roman and not a British foundation," and this is the view now entertained by Antiquaries generally.*

Tacitus mentions distinctly, that Agricola subdued the tribes of North Wales (the *Ordovices*), and of *Mona*, during his first campaign; and it is probable that he selected the site of Chester as his principal basis of operations, forming there a large entrenched camp after the ordinary Roman model, the stamp of which Chester, in its surrounding Walls, bears to the present day. Although we possess no authentic account of the founding of this city by the Romans, we may reasonably assume it to have taken place between A.D. 78 and 80.

Within sight and easy distance of the first range of Welsh hills—on a sloping bank on the east side of the largest river in that part of the country, near to which it expanded into a broad estuary—and overlooking a large plain, the Romans founded the ancient *DEVA*, the modern *CHESTER*, almost coeval in time with that great convulsion of nature, which led to the destruction of Herculaneum and Pompeii. The historian of the Roman wall remarks that, "military reasons directed the choice of the stations," whilst "commercial facilities give rise to modern cities." What striking examples we have in this locality!—Liverpool being the type of the latter, Chester of the former.

There cannot be a doubt that the Romans looked upon *DEVA* as one of their most important military posts, otherwise it is scarcely

* There are several British Coins bearing the name of *Uriconium*, which prove the existence of a British city there, previous to the Roman one; none have been discovered of Chester of a parallel kind.

† Chester Archaeological Society's *Journal*, vol. 1, p. 459.

dealer in antiquities which was said to have been found at the site. No excavations had taken place on the site on which the implement was said to have been found. The person who offered it was a regular old fraud & I had reason to believe that he was also an impostor. Refused to purchase. It is now in the Museum. R.

probable, that it would have formed the head-quarters of one of the principal of the Roman legions, and remained so during nearly the whole of the Roman occupation of Britain; and when we reflect upon its site, we cannot but own, that in a military point of view, it was admirably situated. Its position, with regard to the plain before it and the river in its front, materially assisted in preventing its being surprised by an enemy:—it was within easy distance of the hill country, inhabited by some of the most obstinate tribes the Romans encountered,—the *Ordovices*,—and but a few marches from what had been the centre of Druidism, and might be again were it not for the proximity of the Roman arms. It was adjacent to the large extent of country inhabited by the warlike *Brigantes* (represented in great part by the great manufacturing counties, Lancashire and Cheshire), as well as to the mountains of Cumberland and Westmoreland. It was easy of access for ships, and was probably one of the points of embarkation for Ireland;—was within easy marches of Eburacum (York) and Caerleon, the head-quarters respectively of the 2nd and 9th legions;—and by its position-protected the country from the ravages of the Irish pirates, who frequently landed on the shores of the Dee.

In these days of 'historic doubts,' it is hardly to be wondered at, that a writer has been found hardy enough to doubt, whether Chester be the site of the Roman *DEVA* after all. An article of this character appeared in the *Gentleman's Magazine* for May, 1862, in which the author assigns the situation to Frodsham! His reasons I need scarcely mention here, but, in support of Chester being the true site, I may state, that the *Itinerary of Antoninus* (compiled about 320 A.D.) places the 20th Legion at *DEVA*, and "invariably, when the name of a legion is added in this *Itinerary* to that of a station, the town can be identified by existing remains."* Chester is the only place in this neighbourhood where remains of the 20th legion have been discovered to any extent; and, moreover, it is somewhat singular that no other legionary marks have been found in it. In the "*Saxon Chronicle*" it is called *Lega Ceaster*, the Camp of the Legion—a striking allusion to its occupancy by a large Roman force. I need hardly further allude to this, except to repeat the words of one of the authors of the *Magna Britannia*, "That Chester was the *DEVA* of the Romans is a matter beyond all controversy."†

The 20th legion, the one so intimately connected with the early

* C. R. Smith's *Collectanea Antiqua*, vol. 6, p. 45.

† "Deva, by the universal agreement of Antiquaries, and by all manner of evidence, appears to be Chester." (Horsley's *Britannia Romana*, p. A16.)

A Monumental "S. Anselm" of the Legionis II. Aelii have now been discovered.

history of Chester, appears to have first visited our shores under the Emperor Claudius, A.D. 43. In the army that Suetonius hurried together to defeat the Britons under Boadicea, the *vexillarii* of this legion took a prominent part. We may gather some idea of the importance of this particular section of the Roman army in Britain, by the circumstance that after Suetonius had left, the island enjoyed unusual tranquillity, and was disturbed only by a quarrel between the *proprætor* (Trebellius) and the lieutenant of this legion, Roscius Cœlius, which ended in the flight of the former. Under the subsequent command of Agricola it performed important services, and when he was elevated to the *proprætorship*, it is by no means improbable, that he looked upon *Deva* as one of the most important military posts in the whole island, hence his reasons for founding the city, and for placing his own tried legion there, from which time until the departure of the Romans, it remained the head-quarters of the same legion.

All the Roman legions had their particular animal, &c., for their standard or sign, which originally appeared on the top of the *vexillum* or standard, but in the Consulship of Marius B.C. 104, all other emblems were laid aside, the eagle alone being used on the standard, but the distinctive badge was still used on coins, inscriptions, &c., that of the 20th Legion being the *boar*.* But although Chester was the head-quarters, yet detachments (*vexillations*) of the legion were employed in other parts of Britain.†

Funeral inscriptions of soldiers of this legion have been found at Bath,‡ Ribchester,§ Wroxeter,|| and London.¶ Along the line of the great Roman Wall, and in Scotland, we have abundant proofs of their presence, and of the important operations in which they were concerned. At the former, the numerous inscriptions discovered, prove

* On the obverse of a coin attributed by the Rev. Beale Poste (*British Archaeological Association's Journal*, vol. 2, p. 33) to Cunobeline, is the figure of "a boar rushing to the right."

† "It is not meant that the main body of the legion did not march into the field whenever its services were required; but here they returned in winter, leaving detachments of their auxiliaries to secure the proper posts in the conquered country; here their wives and children remained in security during the campaign; and here a numerous and warlike race of young men were continually growing up to fill their ranks, who, though natives of Britain, had no religion, interest, or manners but theirs, and in fact no country but the camp of the legion itself."—(Lysons' *Cheshire*, p. 435.)

‡ Scarth's *Roman Bath*, pages 58, 59, 62.

§ *British Archaeological Association's Journal*, vol. 6, p. 240.

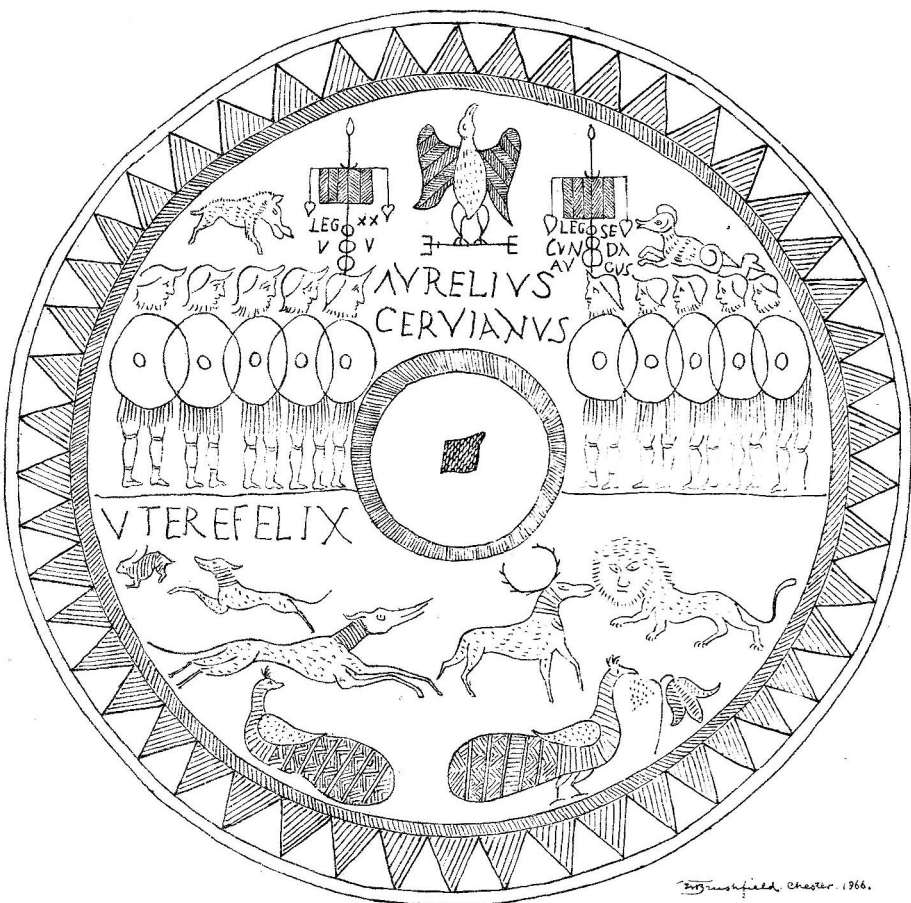
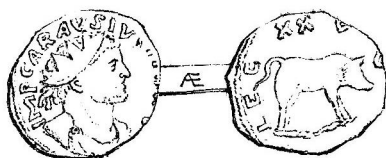
|| *Ibid*, vol. 15, p. 311.

¶ C. R. Smith's *Roman London*, pages 23, 29.

LEGIONARY TABLE FOUND AT BREMENIUM, NEAR
HADRIAN'S WALL.



LEGIONARY COIN OF
CARAUSIUS.



From Rushfield, Chester. 1966.

BRONZE PATERA.

CONTAINING REPRESENTATIONS OF FIGURES AND EMBLEMS, OF THE SECOND AND TWENTIETH
ROMAN LEGIONS. [FROM BUONAROTTI'S "ANCIENT MEDALS".]

that the vallum and wall were one and the same work.* Amongst others was found an altar dedicated by them to the god *Cocidiu*† (supposed to have been the god Mars), the representation of a boar being sculptured at its lower part. Frequently the word *rexillatio*, or its contraction, is found added, as at *Bremenium*.‡ In one inscription found in a fort near Netherall,§ the 2nd Legion is associated with the 20th, (the head-quarters of the 2nd was at Caerleon,) and it is singular that a similar recorded conjunction has been found elsewhere. During the usurpation of Carausius (A.D. 287—293) these two legions appear to have favored his claims, as coins bearing their names and symbols were struck during his reign. Akerman, in his "*Roman Coins relating to Britain*," (p. 134), and also in his large work on "*Roman Coins*" (vol. 2, p. 165), appears to refer these coins of the 20th to the 25th Legion. ("LEG. XXV. V. A boar standing.")|| In Buonarrotti's great work on ancient medals, there is represented a "brass patera," containing figures of the soldiers of these two legions with their emblems.¶

* Bruce's *Roman Wall*, 1st edit, p. 247.

† *Ibid*, p. 401.

‡ *Collectanea Antiqua*, vol. 3, p. 165.

§ *Archaeologia*, vol. 10, p. 137, figured also in Bruce, p. 392.

|| I was enabled through the kindness of Mr. J. Peacock, to exhibit to the Society, an electrotpe copy of one of these coins of Carausius, the original of which is preserved in the Hunterian Museum at Glasgow. A reference to the sketch of this rare coin in the accompanying plate, will show, that the first V of the inscription is removed to some distance from the XX. There are other reasons for believing Akerman's opinion to be incorrect.

¶ This work, published in Rome in 1698, and entitled *Historical Observations on several Ancient Medals, belonging to his Serene Highness Cosmo III., Grand Duke of Tuscany* ("Osservazioni Istoriche sopra alcuni Medagioni Antichi,") contains an engraving of the patera above mentioned. The attention of English Antiquaries was first drawn to it by Mr. C. Roach Smith in his *Antiquities of Richborough, &c.*, p. 24; as however a copy of it has never yet appeared in any English Archaeological work, it is introduced in the accompanying plate on account of its local interest. Buonarotti does not state from what locality the patera was obtained, but in the account of it which he gives in the Introduction, states his opinion that the *Aurelius Cervianus* inscribed on it, was a principal officer who "proceeded to England under orders from Rome." The figures of the five soldiers of each legion, with their standards and emblems, require no description. The collection of animals and birds, may perhaps represent a hunting scene; and it may be remembered that the representations of the stag, hare and dogs, bear a very close resemblance to those often found on pottery, manufactured by the Romans at Castor (Durobrivæ), in Northamptonshire. It will be observed that the words, VTERE FELIX, are inscribed below the figures of the soldiers of the 20th Legion, a vacant space being left below those of the 2nd. They appear to have been used as a kind of good omen, and from being con-

Both of these legions were employed at the Caledonian wall; and of the 20th, two nearly perfect inscriptions have been found in different spots recording the length of wall built under its direction. And about them there is this point worthy of notice, that the legionary emblem "the boar," is figured "in opposite directions, so that when the slabs were placed on the Southern or Roman side of the wall, where they would be seen from the adjacent military road, the boars of the twin legionary stones would be facing each other."* Tending thereby to confirm the suggestion, that "the legionaries were wont to erect these stones in pairs at the beginning and the end of their labors, thereby the more distinctly defining the extent of the work dedicated by them to the favorite Emperor."†

The presence of the term *vexillatio* in many of these inscriptions is of some importance. Tacitus frequently alludes to the *vexilla* or *vexillarii* of the legions, as "being those soldiers who after having served in the legion for sixteen years, became *ex-auctoritati* , but continued to serve in company with that legion under a *vexillum* of their own, until they received their full discharge. Hyginus states the number attached to each legion as usually about five or six hundred."‡ It is very remarkable that amongst the numerous legionary inscriptions found in Chester, we have no record of the term *vexillatio* having been included in any of them,—another proof, if such were required, that DEVA was the head-quarters of this Legion §

The period when the 20th Legion quitted Britain, is generally stated to have been somewhat before the cessation of the Roman occupation (A.D. 409), from the circumstance that the " *Notitia Imperii* ," which was compiled between A.D. 395 and 407,|| does not name it.

* Wilson's *Scottish Archaeology* , p. 377.

† *Ibid.* p. 376.

‡ Smith's *Dictionary of Greek and Roman Antiquities* , art. *Exercitus* .

§ The annexed plate contains representations of the only legionary stamps that were found amongst the Bridge Street remains; and are fair samples of the ordinary type of these stamps.

|| Smith's *Students' Gibbon* , p. 132.

fixed to one side of the patera, would almost seem in some way or other, to be connected with the 20th Legion; this opinion is further strengthened by the circumstance that Alex. Gordon (*Itinerarium Septentrionale* , 1726. p. 118) describes having seen in the collection of a Glasgow Antiquary, "a Cornelian Seal, found near a *Roman Tomulus* , in the Parish of *Kilbride* , four miles south of *Glasgow* , having these letters upon it, Intaglio way, VTERE FELIX"—there is abundant evidence of this locality having been visited by a portion of the Devan legion.

From this, the early part of the 5th century, history tells us of the subsequent invasions of the Saxons, Danes, and Normans. We will, however, not dwell on any of these, but take the liberty accorded to Chroniclers and Archaeologists, and, aided by the wings of time, will skip the historic pages of fourteen centuries, and from noticing the "DEVA of the Romans," we will now change the title to the "CHESTER of the moderns." Dating from June, 1863, we will attempt a description of certain remains of the Roman period, which after remaining latent and quiescent for so many centuries, have been recently discovered, and to the great regret of all Archaeologists, been removed from their site to make way for more modern utilitarian structures. It must be presumed that all members of this Society know the peculiar formation of Chester, with regard to its Walls and principal streets, and that in the southern or Bridge-street there existed, about half way down, on the eastern side, a comfortable, old-fashioned, rather tumble-down-looking hotel, called the 'Feathers,' adjoining the site of one of the many Antiquarian attractions of Chester, the so-called "Roman Bath." This hotel, together with some adjoining property, was condemned to be pulled down, to make way for the erection of some spacious business premises. For this purpose, the ground was required to be excavated below the street level, and for the most part below the level of the mediæval foundations, as well as for a considerable distance backward from the line of the present street.

The Rev. W. H. Massie once tritely remarked, that "if we would look for '*Britannia Romana*,' we must seek it in a stratum some yards under ground,"* and certain it is, that "a large part of the knowledge which we possess of the early history of our country" has been literally *dug up*. This is true of Chester as of all Roman towns, hence it is that we so often avail ourselves of any excavations that may be going forward, on purpose to witness the labors of those practical Archaeologists, the navvies. Thus, when on the site of the old 'Feathers,' on June 20, 1863, a fragment of a pillar of classic origin was unearthed, its discovery was regarded by local Archaeologists as a certain indication that other and more important remains would soon be found. This opinion was almost immediately verified, for two days later (June 22) whilst excavations were being made, to lower the floor of a cellar situated beneath the 'smoke-room' of the old hotel, the laborers laid bare what were evidently the remains of an extensive hypocaust, the pillars of which were within a foot of the old cellar floor, which latter indeed they assisted to support. So close were they, in fact, that it is hardly

* *Chester Archaeological Journal*, vol. 1, p. 70.

possible to conceive but that, during the original construction of the cellar, some of the pillars must have been bared; and, as many of these were missing from their places, they may have been removed at that very period. About ten days afterwards, the base of a large pillar, then still occupying its original position, was found; and from this time until the termination of the excavations, but few days passed during which portions of shafting, other bases, portions of tessellated pavements, &c., were not discovered.

There were also uncovered some remains of a much later date, to which allusion must be made, as they considerably modified the character of certain portions of the ruins; and as moreover, they were thought to be Roman by several Archaeologists, it will be an additional reason for noticing them here. On the site of, and also outside, most Roman stations, are found deep pits containing large quantities of animal matter, intermingled with fragments of bone pins, metal ornaments of various kinds, coins, &c.;—and when on the site of the Bridge-street remains, three rubbish pits were found, they were thought to be probably of Roman origin. Of these, one was of an irregular square form, and occupied the middle of the fourth room,—one, an equal sided square, was in the interspace between the rows of pillars and opposite the sixth pillar from the west,—the third, of circular form, was found close to the north side of the second row of pillars, upon the site of one of which it considerably encroached. That they were not Roman was evidenced by their position, and partly and principally by their contents being wholly devoid of remains of a Roman character. They contained a large quantity of animal matter amongst other debris, together with large quantities of burnt wood and fragments of mediæval pottery,—and they were in all probability mediæval cesspools.*

Another excavation, situated nearer Bridge-street, contained a large number of animal bones,—this may or may not have been of Roman origin, bones being frequently found in large quantities on Roman sites; but beyond their presence, there was no indication of the period of their being deposited. Opposite the junction of the fourth and fifth rooms, and close to the outside of the main wall, a deep well, four feet in diameter, was uncovered,—the upper boundary of which was of masonry. The presence of mortar of very friable character, and the juxtaposition of the well to the main wall were proofs of its late construction. Entering the south side, and over the site of the wall, was a portion of leaden suction pipe. The well contained twenty-nine feet of water.

* At the north-east corner of the first apartment containing the hypocaust, was a deep ash and rubbish pit—and at the adjoining corner one still deeper, which contained amongst the rubbish a large number of broken 16th and 17th century pipes.

Of all the Roman remains thus briefly described, not one is now visible to us in its original position—some have been used in the buildings now in progress—some have been removed to the grounds attached to the Water Tower Museum—and some are in private hands, so that with regard to their original site they are now practically obliterated.* In their original position they were of the utmost interest to us as lovers of local archaeology, and of practical use to antiquaries in general, as exhibiting some new phases of Roman work, as well as for the sake of comparison with other remains of the same era in other parts of Britain;† but once removed from their original position, they become, except in the case of works of art, little else than unmeaning stones. It is one of the unfortunate circumstances attending modern improvements, that early remains when discovered are usually found just in the way of some important portion of the projected new structure, and as in towns and cities land is daily increasing in value, these remains are soon swept away, everything being sacrificed to utility.

The excavated portion, which contained the bulk of the Roman remains, was about 128 feet in length by 88 feet in width; and these will now be briefly described, the details being reserved for a subsequent fuller description. Commencing, then, with those discovered at the western end of the south side, there first appeared the foundation courses of a massive stone wall, running almost due east and west. Projecting from this at right angles on the southern face, were other walls of the same character, but of less thickness; and which, placed at unequal distances, divided the space into what were apparently rooms

* At the rear of the newly-erected premises, portions of two bases have been preserved, and upon them have been placed fragments of some of the columns and capitals, mainly with a view to identify the site of the discoveries.

† Thanks however to Mr. Hodkinson, the architect of the site, and to Mr. Lockwood, another Chester architect, we possess accurate plans of the whole of the remains so far discovered. The latter gentleman has also taken the levels of the pillars, &c., compared with that of the present street, and has thus—not without a great expenditure of time and trouble—been enabled to assign the position which the old “Roman Bath” bears to the other remains. I have to thank Mr. Peacock for very much information about the discoveries; and had it not been that he attended personally to sketch and measure tessellated pavements, &c., as soon as found, and to identify and preserve several interesting remains as soon as they were unearthed, much valuable information would have been lost. The Chester Archaeological Society owe this gentleman a deep debt of gratitude for his exertions. Many thanks also are due to Mr. Bellis, the builder, for much kindness, courtesy, and forbearance. at a time when a large number of visitors must have been a considerable hindrance to his practical operations as a builder.

of different dimensions, to which the thicker wall formed the outer boundary. A noticeable feature in the whole of these walls was their tolerably uniform height. Enclosing these spaces on the south, was a stone wall of considerable height, which from its forming the divisional wall belonging to the adjoining property, constituted the boundary of the excavations on that side. This appeared at first sight like Roman work, for which it was frequently mistaken, but there appears no reason to doubt that it was erected at a much later period, and most probably with the material derived from the Roman buildings on its site.*

The main wall at the first angle was defective, and it at first appeared as though the original building had commenced here, but it was soon evident, that there had been one or more rooms between the apartment first discovered and the present line of the street, as although the upper courses of the main wall had been removed, it was found on excavating, that some of the lower ones, in advance of the cross wall, still existed. Passing the first partition wall, we entered the site of a spacious room, the floor of which was covered with broken, irregular masses of concrete, of unmistakeable Roman character, but no tesserae were found. On clearing away the concrete, we came to two layers of thick red tiles (all much starred and fractured), interspersed here and there with a sandstone flag. On raising these, it was at once apparent that they formed the roof of a hypocaust, as their removal exposed to view the heads of the supporting pillars, each consisting of a single block of red sandstone; the interspaces being occupied by a compact solid mass, composed of ashes, drainage material, and general rubbish, derived from the numerous cesspools, drains, and ash-pits in the immediate vicinity. Although many of the stone supports, particularly at the east end, were absent, and many that remained were fragmentary, yet all that were found occupied, apparently, their original positions.†

Crossing over the next partition, we entered another room of considerable dimensions, and the first object that struck the attention, was a peculiar square opening in the base of the outside wall. Tesserae were here found amongst the rubbish in considerable numbers; and in the south-west portion of the room was bared a large fragment of a pavement, composed of black and white tesserae on a thick bed of concrete. This had apparently been wilfully mutilated, as the mass was not only much fractured, but occupied a slanting position, owing to

* Under the heading of 'Roman masonry' this wall will be again alluded to. In the photograph of the hypocaust it will be seen to form the background.

† These *pilæ* are admirably shown in the accompanying photograph.

some of the supports having been removed; and, moreover, one of the broken pilæ was found lying upon the surface of the pavement. There was satisfactory evidence, of the whole of the base of this room having been occupied by a hypocaust, as some of the sandstone pilæ still remained *in situ*. This was also the case with a small apartment, partitioned off from the larger one, but here the pilæ were remarkable for consisting of two different kinds of material, some of them being of sandstone as in the other examples, and some built up of thick red tiles: they supported a black and white tessellated pavement of simple pattern. Beyond this was a small apartment having a tessellated pavement ornamented with some curious figures, and also possessing a hypocaust. Beyond this again was another and larger room, which had, likely enough, originally possessed a hypocaust and pavement, but the whole of the remains of these were probably removed, at the time when a large excavation was made, apparently for drainage purposes. So that from one end to the other, there was a succession of quadrangular rooms of different sizes, all having hypocaust arrangements, and nearly all possessed of tessellated floors.*

Commencing again at the western extremity, and at a few feet to the north of the main wall, we first arrived at a peculiar square excavation in the solid rock, which had been included in the site of a modern wall, and, for some time, it was thought probable, that it was not of early date. Beyond this were found the bases of five pillars in succession, each resting on a large square block of sandstone, partly sunk in the rock; then a square excavation, followed by another base, and terminating with the sites of two others; the noticeable feature being that the sites were equi-distant from each other, and parallel to the outside wall of the rooms, which have just been noticed. Between 30 and 40 feet to the north of these pillars, and parallel to them, were found the remains of another row, of which three only exhibited the bases, but the sites of seven others were evident. On comparing the bases with those on the opposite side, the 2nd and 3rd were opposite to bases in the first row. The first deserves a special mention. It was the only base which was surmounted by a portion of the original shaft, and had formed part of the boundary of some modern room; in which position, the exposed portion had been whitewashed. Its position moreover was exactly opposite that of the square excavation, already alluded to, as having been at first thought of comparatively modern date,

* The commencement of a fourth pavement of this character has been laid bare at the extreme eastern end of the excavations, and within the boundary of the main wall.

* Excavated Oct. 1891, and built in a room similar to the others. It was discovered by Mr. Newstead, the architect.
R. Newstead.

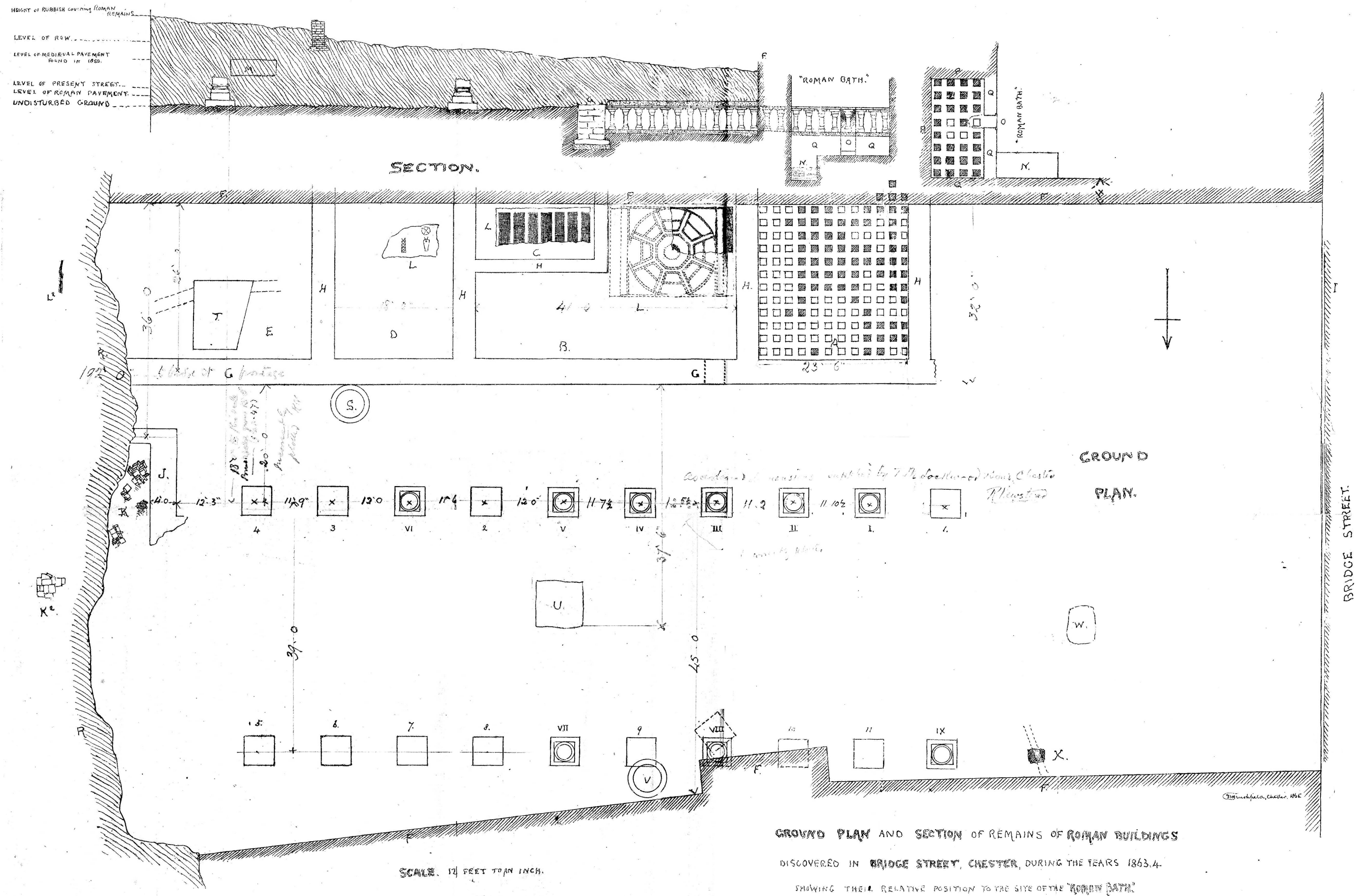
and which was similar in appearance and character to the sites of the other absent bases.*

Sell- So that we possess ample evidence of the original erection of two rows of pillars (ten on either side), parallel to each other, and to the apartments already noticed. But there was no evidence whatever (and repeated search was made) of the original existence of any pillars, bridging or connecting the interspaces of the terminal pillars of the two rows. The sites of the lateral ones, where the bases were absent, were so clearly marked, that it appeared scarcely probable for pillars to have originally occupied the wide spaces at the two ends, and yet to have left no traces of their existence. It appears unreasonable to believe that the foundations of these latter should have been of slighter character than the rest. Had they existed and been of the same depth as the others, they must have been discovered, as the ground on the site they were suggested to have occupied, was undisturbed.

the horizontal structure
west wall
 Principally within the large quadrangular space formed by the pillars, there were exhumed large portions of the shafts and capitals of columns; some of them much broken, all recumbent, and apparently lying on the original level, except a portion of one shaft which was found lying horizontally in the debris, about two feet above this level. Fragments of the capitals were found in several of the modern walls, and at the Bridge-street end, several portions of pillars of a smaller size. Beyond the last pillar at the east end, were the remains of a narrow wall, a few feet from the main wall, to which it ran parallel; this was met by another at right angles to it, about the same distance from the last pillar that the pillars were from each other: there were evidences of another angle at the foot of the latter most distant from the main wall. Beyond the first angle just alluded to were the remains of an irregular pavement, formed partly of herring-bone bricks, and partly of common tiles, not uniform in shape or size, bedded upon a substructure of concrete of some thickness. At the west end, between the pillars and the line of the street, was a mass of concrete, the evident foundation of a wall—and I am informed that some remains of Roman walls were also discovered close to the line of the street.†

* In the "general plan" it will be observed that the modern buildings forming the northern boundary of the excavations, intersect the line of the sites of two of the pillars. In one of these a portion of the original site was still evident.—In the second, the base was found, although displaced from its proper position. It is on record that several portions of pillar shafts were found during the erection of these buildings between thirty and forty years ago, which were worked into common steps, and continue to be used as such to this day.

† I was absent from Chester when the excavations revealed the remains of these front walls, and they had been covered with rubbish prior to my return. They



GROUND PLAN AND SECTION OF REMAINS OF ROMAN BUILDINGS

DISCOVERED IN BRIDGE STREET, CHESTER, DURING THE YEARS 1863-4.

SHOWING THEIR RELATIVE POSITION TO THE SITE OF THE "MURDER BATH"

At this end were also found a few fragments of some smaller pillars. Neither in the inter-space of the two rows of pillars, nor between the first row and the wall, were there any indications of paving or masonry.

Such were those portions of the remains which were indisputably of Roman work. Amongst the debris were discovered large quantities of fragments of tiles of various kinds, charcoal, and some miscellaneous antiquities to which I shall hereafter direct attention.*

* The following is the explanation of the references in the Plate of the Ground Plan and section of the Bridge-street remains, which also includes a plan and section of the existing hypocaust and "Roman Bath," and their relative position to each other:—

- | | |
|----------------|--|
| A, B, C, D, E. | Portions of the sites of five of the rooms of the Roman building. In A, the shaded squares represent the pillars of the hypocaust which remained in their original position. |
| F, F, F, F. | Modern walls, forming the north and south boundaries of the excavations. |
| G, G. | External wall of the rooms. The dotted line close to the right hand G shows the position of the square opening in the base of the wall. |
| H, H, H, H, H. | Inner walls. |
| I, I. | Remains of foundations of Roman walls, adjoining the buildings fronting Bridge-street, to which they were <i>exterior</i> . |
| J. | Fragment of wall forming a portion of a passage, &c. |
| K. | Small brick pavement, arranged in a herring-bone pattern. Much worn, irregular, and patched with portions of large tiles. |
| K ² | Remains of similar pavement with a greater share of large tiles, found at a subsequent date to the other discoveries. |
| L, L, L. | Remains of tessellated pavements. |
| L ² | Fragments of a fourth tessellated pavement, found at a much later date. |
| M. | Position of portion of columnar shafting as found in rubbish. |
| N. | Square tank, excavated in solid rock, and containing water. |
| O. | Doorway to hypocaust. |
| P, P. | Roman walls. |
| Q, Q. | Walls of late (mediæval?) period. N, O, P, Q refer wholly to existing hypocaust and 'Roman Bath.' |
| R, R. | Un-excavated portion of rubbish. |
| S. | Well. |
| T, U, V. | Excavations in rock, of post-Roman period. U, V contained mediæval pottery. V was partly walled. |
| W. | Excavation in rock, containing animal bones. |
| X. | Mass of concrete, through which a drain had been made. |
| I to IX. | Bases of pillars. All of which were found <i>in situ</i> excepting VIII. in which instance the dotted line shows the position it occupied at the time it was discovered. |
| 1 to 11. | Sites of pillars excavated in the rock. |

were, however, seen by Mr. Wynne E foulkes and Mr. Hodkinson, by whom they were examined and pronounced to be decidedly of Roman origin. The main front wall of the modern buildings recently erected is built immediately within the line of these remains of Roman masonry, so that the original Roman street was probably of less width than the present one.

We will now pass on to examine the remains of these Roman buildings in detail, and first of those materials made from clay.—

We have to thank the Romans for the introduction of many useful arts into Britain, but for none more than for sundry operations connected with the manufacture of articles from native clay; *e.g.*—1. The art of converting the immense beds of clay into bricks and tiles for building operations. 2. The introduction of the potter's wheel for the production of fictile ware, for useful domestic purposes, as well as for ornament. And 3, for the introduction of the art of kiln baking.

By the researches of archaeologists it has been proved that bricks and tiles were unknown to the Britons, prior to the arrival of the Romans; and all articles of pottery were fashioned and ornamented by hand, being built up as it were piecemeal, and then sun dried. All who have made Roman remains their study testify to the wonderful durability of their building materials in clay; so much so that a slight examination is usually all that is required to assign their origin. In comparing tiles from different parts of England, and of different epochs of the Roman occupation, it is wonderful to see how closely they resemble each other in texture, color, and all essential points; this was due to the extraordinary care they employed in every stage of their manufacture. In the works of Vitruvius—the only Architect of Classic times whose writings have descended to us—one chapter—the 3rd. of the 2nd. book—is devoted to the article *Bricks*, and points out how carefully the clay ought to be selected and tempered, the proper seasons for brickmaking, &c., and contains the following sentence which ought to be learnt by heart by all modern brickmakers, who have no regard to the durability of their manufactures, providing they only hold together during their generation. Vitruvius writes, “those bricks are best that have been made *at least two years*; for in a period less than that they will not dry thoroughly.” Their evenness and closeness of texture, uniformly red color, hardness, and absence of stones, show the extraordinary amount of care exercised by the Roman workman.*

Wherever these tiles were made, we judge that the places were unenclosed, and that they were dried in the same manner as bricks are in this part of the country, viz. spread out singly on the ground.† We learn this from the circumstance that many of them exhibit the im-

* Owing to the clay building manufactures of the Romans being thin, flat, and of a character similar to our modern tiles, rather than to the bricks of the present day, they are generally called by the former name.

† In the South of England, the modern process of manufacture does not require this plan to be followed, but, as soon as moulded, the bricks are built up like loose walls, so as to allow the free passage of air between them.

pressions of the feet of various animals, and even of man; evidencing that the clay was at the time pliable enough to receive the impression, and also that the tile remained long enough on the drying ground to make such impression permanent. There is a well marked one, shewing the feet of a dog, on one of the roof tiles used in the construction of a tomb, found a few years since in the Infirmary field, Chester, and now in the grounds attached to the Water Tower.*† Marks of the feet of goats, sheep, pigs, cows, horses, cats, ravens, deer, &c., have been found on Roman tiles in various parts of the country. In this simple manner, we are enabled to prove the common existence of these animals and birds in Britain during the Roman period, and they are as interesting to us as Archaeologists, as the discovery of the impressions of the feet of an antediluvian animal, the *Cheirotherium*, (figured in Buckland's *Bridgewater Treatise*) found in one of the beds of stone at Storeton, near Bebington, in this county, was to Geologists. At Leicester,† tiles impressed with the feet of "the wild boar, the fox, and the wolf," have been found. One "retains the distinct impression of a naked (human) foot."‡ At Wroxeter, Caerleon, York,§ Church

* The discovery of this tomb is thus described in the *Chester Chronicle* of June 5, 1858:—

"DISCOVERY OF A ROMAN INTERMENT IN CHESTER.—The men employed in making the necessary railway preparations for a siding, to accommodate the exhibitors at the Royal Agricultural Show, in the field adjoining the Infirmary, discovered, on Thursday afternoon, a quantity of stones and tiles, of an unusual size and character, about four feet below the surface. Mr. J. Peacock was immediately sent for, and superintended the excavation, which proved to be a Roman interment, resembling in form and character the tomb of a soldier of the 6th Roman Legion found at York. In the tomb were found a very pretty *terra cotta* lamp; a clay vessel, of the same ornamentation as the one in Mr. C. Roach Smith's collection of 'London Antiquities;' a lesser clay vessel, in fragments, in which was found a second brass coin of Domitian, of the *Moneta Augusti* type, (a female figure, standing, holding balance and cornucopia); a few bones and teeth, apparently those of a young person; and a large iron nail, of the size and shape usually found in Roman tumuli. The tiles, &c, which composed the tomb, have been removed to the Water Tower Museum, there to be arranged as discovered. We are pleased with this antiquarian *trouvaille*, and congratulate the city upon its Local Society, formed for the protection and preservation of these 'silent memorials of the past.'"

† *Roman Leicester*, by Mr. J. F. Hollings, in the 'Leicestershire Mercury' for January 7, 1851.

‡ Vide also *Journal of Archaeological Institute*, vol. 6, p. 16.

§ Vide Bateman's *Catalogue of Antiquities*, p. 127.

D

+ *Journal of the Society of Antiquaries*, vol. 1, p. 10.

Stretton* in Shropshire, and elsewhere, tiles have been found bearing the imprint of the nails of sandals; and of that form used by the ordinary Roman soldiers, which were heavy and thickly studded with hobnails, and known as Caligæ.† In the museum of our associate, Mr. Frederick Potts, is a tile, found in Chester, bearing a legionary stamp, at right angles to which is a well marked impression of a sandal of this description. In the same collection, another tile, of the flanged variety, bears six distinct marks of dog's feet.‡ It is interesting to know that specimens of this very description of sandal have been found in London, &c.§ At Leicester, on a tile was "a rude figure, evidently sketched with the point of a stick by some careless bystander;"|| whilst on one found at Caerwent, the word 'Bellicianus' had been rudely written four times, the interest attaching to which "arises from its being a very fair specimen of what may possibly have been the cursive hand of the British Romans."¶

In Rome, it was the law that every brickmaker should impress his manufactures with his own stamp—such mark being the figure of a god, an animal, &c., encircled with his own name, and often with the name of the place (Smith's *Classical Dictionary*.) This appears to have been the case (as far as the maker's name was concerned) with pottery also, especially in the Samian ware. In Britain, however, this does not appear to have been urged as a law, as large numbers of the tiles

* *Archæologia*, vol. 31, p. 343.

† The Emperor Caligula is stated to have received that name when a boy, in consequence of wearing the Caligæ, which his father Germanicus put on his son in order to please the soldiers.

‡ Each of these tiles is figured in the accompanying plate. This is a fitting opportunity to acknowledge the liberality of Mr. F. Potts in permitting the free use of many valuable local antiquities at the meetings of the Society, in illustration of this paper.

§ Illustrations of these sandals appear in C. R. Smith's *Roman London*, pp. 132-3; *Archæologia*, vol. 10, p. 478; and in an interesting paper *On Ancient Shoes*, by Mr. Mayer, in vol. 1 of the *Transactions of the Lancashire and Cheshire Historic Society*.

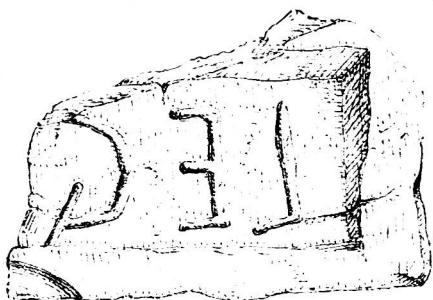
|| *Roman Leicester*, ut supra. A similar example, found in Chester, is drawn in the accompanying plate.

¶ *Isca Silurum*, p. 44, and figured in plate 24. There are several notices of written inscriptions on tiles, in Birch's *Ancient Pottery*, vol. 2. p.p. 360-1; and in *Archæologia*, vol. 8, p. 80, is an engraving and description of a *tegula*, "having three rows of scrawling cursive writing upon it, which cannot be deciphered."



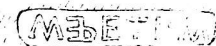
Legionary
Stamps on a red
tile 1 1/2 in. high with
impressions of C. sigla.
Size 6 1/2 in. x 5 in.

Now in coll. Gen. Maassen
Aug. 12. 1930



Remnant of a fragment of a tile on a tegula.
Size 3 1/2 in. x 2 1/2 in.

Inscriptions on a curved D.
on a fragment of a tegula.



Bottom stamp with an
inscribed D. (C. sigla)



Legionary inscription on a tile 2 in. thick. Size 8 1/2 in. x 7 in.

Now in coll. Gen. Maassen
Aug. 12. 1930

TILES FOUND IN CHESTER AT VARIOUS PERIODS, AND
NOW IN THE MUSEUM OF FRED POTTES ESQ. *reproduced.*

bear no stamp whatever. Others again bear letters, apparently the maker's initials, as in some examples found at Bisley, in Gloucestershire, marked with the letters TPFA.* A tile at Cirencester bore the mark TC.M, the third letter probably signifying *manu*; whilst "a portion of a flanged tile from the Leauses, was marked with the letters TPLF (*ecit*)."[†] At Chedworth, in Gloucestershire, was discovered a hypocaust constructed of tiles, all of which were marked "ARVIRI, in Roman capitals about two inches long."[‡] Amongst those found in Bridge-street, I am only aware of two having been discovered with marks of this description, which through the kindness of Mr. Hodgkinson are now exhibited (*vide plate*). In Chester, at Caerleon, York, London, &c., and in fact at almost every Roman station, numerous legionary inscriptions are found on tiles, thus not only identifying the places where the legions were stationed, but materially assisting to confirm the statements of writers with respect to the history of England during the Roman period. To show the importance of these marks I may mention that Mr. P. E. Wiewer has been enabled to trace the 22nd Legion through a great part of Germany by means of them.§

The only stamp impress on Roman tiles hitherto found in Chester, has been that of the 20th Legion. The usual formula is LEG.XX.V.V. (*Legio Vicesima Valeria Victrix*), and the two examples found in Bridge-street, are of this kind. In some instances one V only (for *Victrix*) is employed, as in the inscription partly defaced by a sandal mark already

* *Journal of Archaeological Institute*, vol. 1, p. 42.

† Buckman and Newmarch's *Cirencester*, p. 68.

‡ Rudder, in his *History of Gloucestershire*, p. 334, renders this as *A Romanis Viribus*; but a reference to the potters' stamps in C. R. Smith's *Roman London*, will point out the true meaning to be, more probably, the tile maker's name in the genitive case, M (*anu*), F (*ecit*), or OF (*ficina*) being understood.

§ Smith's *Classical Dictionary*, art. *Later*. Several tiles discovered in London bore the letters PPBR.LON, rendered as "*Proprætor Britannicæ Londini*," the Proprætor of Britain at Londinium. (C. R. Smith's *Roman London*, p. 31.) Again on the Kentish coast, others marked CL.BR have been found, supposed to mean "*Classiarii Britannici*,"—the mariners of the British fleet; if this rendering be correct, we have *one*, if not *the* earliest historic notice of a British fleet. Mr. C. R. Smith's explanation of these letters is confirmed by the fragment of an altar found at Lymne, containing an inscription, where the CL.BR, is extended to CLAS BRIT. (Wright's *Wanderings of an Antiquary*, pp. 131-2.)

referred to.* In others the letters are reversed, and whenever this is the case, they are usually more rude in character.†

The collection formed by Mr. F. Potts, contains a tile, bearing a legionary mark of a singular and unique character; at the end of the usual formula is a double letter, like CE joined together, which has been suggested to be an abbreviation for CEASTER, CESTER, or CESTRIA. None of these terms, however, appear to have been applied to Chester, until the cessation of the Roman occupation in Britain. There appears to be reasonable grounds for believing that the letters were meant for DE, the former being reversed and attached to the E. If this be the correct explanation, it is remarkable for corroborating the entry in the 2nd *Iter* of Antonine:—"DEVA LEG. XX VICTRIX;" as well as for containing the name of the Station, as hitherto, London has been "the only instance of the preservation of the name of the city in an inscription."‡

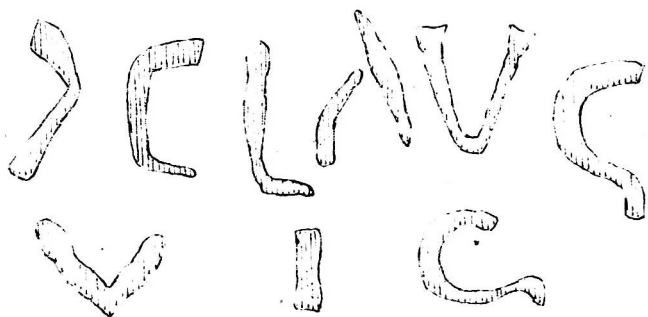
It is a singular fact, that out of the large number of legionary marks, on tiles dug up in Chester, scarcely two appear to have been struck from the same stamp:—whilst some are extremely rude in character,

* The first illustration of Cheshire antiquities, figured in Horsley's *Britannia Romana*, is that of a legionary stamp, containing a single V; and in the MS. notes appended to the copy in the British Museum (probably in the handwriting of Dr. Ward, its original possessor), is the suggestion at p. 314, that "the letter V may be wanting, as not having taken the impression on the brick:" this explanation is, however, unnecessary, as the works of Goltz and Gruter contain numerous examples, of the formula of the 20th Legion being complete, without the second V; corroborated in the Chester specimen, by the presence of a line of enclosure, as seen in the plate.

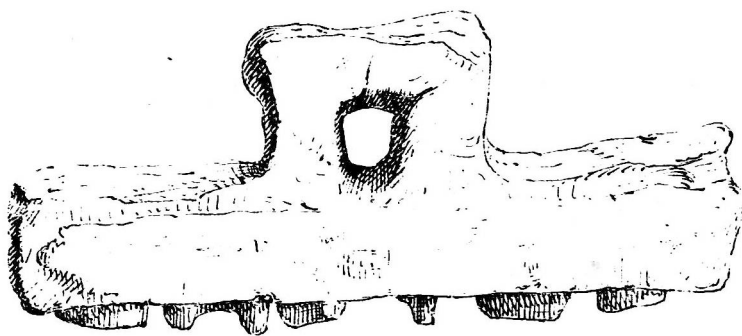
† A local example, from Mr. F. Potts' collection, is figured in the accompanying plate: another appears in a plate at p. 84 of vol. 1 of the *Journal of the Lancashire and Cheshire Historic Society*. In plate 23 of Lee's *Isca Silurum*, a reversed mark of the 2nd Legion is represented.

‡ C. R. Smith's *Roman London*, p. 32. Although the junction of two, and even of three, letters, and also their reversal whether single or joined, are very common in Roman inscriptions, yet there appears to have been a repugnance to reverse the letter D, or to join it to others, which perhaps arose from some antipathy to alter its form or position, from being so frequently employed to denote a deity at the commencement of dedicatory and funeral inscriptions. A reversed D appears on the back of a painter's palette found at Wroxeter, and engraved in the *Journal of the British Archaeological Association*, vol. 15, plate 28; and a banded example appears in a potter's stamp, figured in C. R. Smith's *Roman London*, p. 101. These are the only examples yet met with, after a somewhat extensive research. This is perhaps the most important objection which can be urged against the attempted explanation of the legionary mark above described.

SIZE OF ORIGINAL.



FAC SIMILE OF IMPRESSION.



LEADEN STAMP, WITH RAISED LETTERS
FOUND IN CHESTER

IN THE MUSEUM OF FREDERIC POTTS ESQ.

20/10/18/18

others are tolerably regular and graceful. It is further a matter of surprise, that none of the original stamps (i.e. of the legionary ones) have been discovered. That some of these may have been made of wood, stone, or baked clay, is by no means improbable; but a close examination of some of the impressions from them, tends rather to show that they were frequently constructed of lead. This metal is known to have been in common use by the Romans; and, according to Pliny, was so plentiful in Britain, that its exportation from that province was by law placed under a certain amount of restriction. The stamp was probably formed from a thick piece of lead, on the surface of which the letters were easily indented, by means of a blunt chisel struck with a hammer. In one of the marked tiles found in Bridge-street, the second V appears to have been formed a second time, from the first blows having been too slight.* *Pl. 2 p. 6. 26*

This plan of working the stamp serves partly to explain the origin of the reversed impressions, as a novice would be apt to forget that to obtain a correct consecutiveness of the letters, the form would have to be reversed in the stamp itself.†

An original Roman leaden stamp, possessing some peculiarities, was found in Chester a few years since, and fortunately found its way into the museum of Mr. F. Potts. It is of a square form, 3½ in. long by 1½ in. broad, and having a rudely perforated leaden handle. The inscription is contained in two lines, the first consisting apparently of the letters CLAVG, preceded by a centurial mark, and the second of VIC (*Centuria Claudii Augusti Victricis?*)‡ *Pl. 2 p. 6. 27*

* In the accompanying plate, where this mark is figured, the first limb of the V is seen to be double. In two other examples, the G has a second curve appended to it, to distinguish it from a C, and which approximates closely in character to the primary curve, as though the same rounded chisel had been used for each purpose; and also, the ends of all the letters are bifurcated.

† In plate 23 of Lee's *Isca Silurum* is a singular example of a reversed inscription, the individual letters of which are not reversed.

‡ As represented in the accompanying plate, it will be noticed that the letters are raised, like ordinary printers' type, so that their impression would be sunken; this is just the reverse of what is usually found on tiles and pottery. The general character of the stamp approaches that of the potters' marks found on amphoræ and mortaria. (Vide C. R. Smith's *Collectanea Antiqua*, vol. 1, plate 50; Lee's *Isca Silurum*, plate 23, and woodcut at p. 22; a centurial mark in plate 41 of Horsley's *Britannia Romana*; and plates 64 and 65, in vol. 3 of the Supplement to Montfaucon's *Antiquité Expliquée*, which contains several representations of stamps and their impressions, some of which approximate in character to the Chester example.) It is somewhat hazardous to offer any

There is yet another point of interest connected with these stamps, namely, the *idea* of printing which they convey, but which, although, to a certain extent, practised in Assyria and Egypt long before the foundation of Rome, yet did not emerge from this idea until the 15th century; when, after having endured ages of darkness, it sprung forth to illumine the world with its dazzling rays, never to be dimmed until time shall be no more!

The first, simplest, and most common form of tile to notice is the ordinary square kind (*lateres*), found in immense numbers on almost every Roman site;—varying in size from 8in. square and 1in. thick, as at Bignor in Sussex, to 24in. square and 3in. thick found in Chester. They were used for all kinds of building purposes, their employment being partly governed by the presence of clay in or near the site, and partly by the readiness with which stone could be obtained. It is somewhat singular, however, that in Chester, where clay is abundant and the stone not particularly good, articles made from the former are comparatively rare. One of their chief uses was as bonding courses in walls, generally in beds of two or three layers in England, but on the continent usually more. Their presence is remarkably characteristic of Roman work, and must have afforded a pleasing relief to the eye, as all who have visited Wroxeter may perhaps recollect. Sometimes the entire wall was constructed of them, as in an example in Lower Thames-street, London.* It is singular, that, in all the Roman remains of Chester, we have no record of the discovery of any wall having these bonding courses; a peculiarity which will again come under our consideration when describing Roman masonry.

But they do not appear in Britain to have been used so extensively, as was the case on some parts of the continent, of which latter two examples may be noted. At the village of Cinq Mars, four leagues from Tours, there is a square column “upwards of ninety feet high, the shaft being about $4\frac{1}{2}$ ft. square, except towards the base, where it expands to 17 ft. by 19 * * built of tiles to the depth of 3 ft. on each face, the body being a concrete of great hardness.”† At

* Wright's *Celt, Roman, and Saxon*, 2nd edit., p. 158.

† *Collectanea Antiqua*, vol. 4, pp. 11-12.

suggestion, as to the purpose for which this stamp was originally intended; nevertheless, when it is recollected that articles of daily consumption—as in the instance of loaves found in a baker's shop at Pompeii—were frequently impressed with a stamp, it does not appear altogether improbable that the example in question, was for the purpose of marking the bread made for a certain section of the Roman soldiers at Deva.

Frèjus, where "there is a well entirely built of Roman tile," there is a noble archway, the masonry having remarkably deep courses of bonding tiles, some of which contain as many as six layers.*

Tiles frequently entered into the formation of arches of windows, doors, gateways, &c.,—sometimes being confined to a single course, set at right angles to the radius of the arch, as in the archway at Frèjus, to which reference has already been made; or alternating with the proper stones of the arch as at Lillebonne; sometimes laid flat and overlapping each other, thus forming a pseudo-arch, as in the example discovered in London;† and frequently the entire arch is found constructed of these tiles, as in examples at London, Colchester, Wroxeter, &c.—When thus formed, there may be one, two, or even three circles of tiles. In none of the Roman arches hitherto discovered in Chester have tiles been employed.

Their next most common use was to form the pilæ, or small pillars of the hypocausts, as well as the basis of the floor supported by them. An example of this kind was found at that outpost to DEVA,—Caer-gwrle,—during the last century.‡

The pillars were generally built of 8in. tiles, from 1½in. to 2in. thick, the first layer of tiles upon them from 12in. to 18in. square, and the uppermost 24in. square. This was the form of construction at Wroxeter, where, however, the tiles were loosely placed on each other—whilst in the instance of the one found on the site of the Corn Exchange, London, a layer of mortar intervened between each tile.§

In the Chester Bridge-street remains, some of the pillars in the third apartment, were constructed of these small tiles; and in all four of the rooms containing remains of hypocausts, the base of the floor supported by them, was constructed of tiles of the largest size; there

*Col. & Museum
Chester*

* *Collectanea Antiqua*, vol. 5, p. 23.

† *British Archaeological Association Journal*, vol. 1, p. 45. A similar construction is met with in some hypocausts, of which examples are shown in plate 8 of Stuart's *Caledonia Romana*, and also in plate 22, fig. 11, of Lee's *Isca Silurum*.

‡ At Caer-gwrle was found "what could have been nothing more than an hypocaust begun by the Romans, who, as luxury increased into wealth, made great use of baths. It was five ells long, four broad, and about half an ell high. It was enclosed with walls of hewn stone, the pavement of brick set in mortar; on brick pillars rested a vault formed of polished tiles, and in several places perforated, on which stood brick flews, by which the heat was lessened, and as the poet expresses it, the hypocausts deepened the steam (*volvebant hypocaustæ vaporem*)." The bricks had "Legio XX" stamped on them. (Gough's Edit. of Camden's *Britannia*, vol. 2, p. 589.)

§ *Journal of British Archaeological Association*, vol. 4, p. 40.

was however a marked absence of fragments of this class of tiles amongst the rubbish covering the remains. At the Roman villa at Hartlip, the steps leading to some of the lower chambers were wholly composed of ordinary square tiles.*

They frequently formed the seats in the warm bath, as at Caerleon. At Wroxeter a large floor, supposed by Mr. Wright to have been a bath, was found constructed of them.† At the Bartlow hills in Essex, they assisted in the construction of some of the tombs.

Now it happens that in many of our English churches, more particularly in those situated in the southern and eastern portions of the country, there are examples of quoining, circular headed windows, walls, &c., partly or wholly constructed of Roman flat tiles, known to be such by the remains of Roman concrete still adhering to them; notwithstanding which, the existence of these materials must not be accepted as proof that the buildings were erected by the Romans. For instance, at the church of Lyminge, in Kent,‡ and that of All Saints, Brixworth, Northamptonshire,§ there are window arches, constructed of Roman tiles, associated with masonry of a much later date. At Lyminge there is also a small cupboard or almary, for holding some of the utensils used in the Roman Catholic service, formed wholly of them. At the west angles of the nave of the church of Bedfield, Suffolk, is a most singular example of early quoining, consisting of Roman tiles "placed alternately, horizontal and upright on the long and short principle, having at the point on which the roof rests five tiles disposed horizontally."||

After the departure of the Romans, the art of tile making seems to have degenerated. Our associate, Mr. W. Beamont, tersely remarked that "the Saxons were mean builders; neither the structure nor the materials of a Saxon house were calculated for long duration, else would our Saxon ancestors, during their long sway in England, have left us more numerous, as well as more perfect remains of the buildings they erected for civil or religious purposes."¶ Instead of obtaining new materials, they appear to have been content with using those which had been already employed in the buildings of their predecessors, so that

* *Collectanea Antiqua*, vol. 2, p. 10.

† *British Archaeological Association Journal*, vol. 15, p. 223.

‡ *Collectanea Antiqua*, vol. 5, p. 196.

§ *British Archaeological Association Journal*, vol. 19, pp. 297 to 309.

|| *Ibid*, vol. 1, pp. 117 to 120.

¶ *Ibid*, vol. 5, p. 291.

the presence of any Roman tiles, &c., in a church, is a sure indication of the presence of some Roman remains in the immediate locality. The very church of Lyminge in Kent, to which attention has just been drawn, is actually built over the ruins of a Roman building, the materials of which were extensively used in the erection of the subsequent ecclesiastical structure.

An apparent exception exists at Colchester, where the churches and old buildings generally, are found to contain a large number of what appear at first sight to be Roman tiles, but which are evidently of Saxon or Norman manufacture—being of a duller, darker red, less firm and compact, and having no traces of Roman concrete adhering to them.¹

Besides the square form, in London,² Gloucestershire,³ and at Verulamium,⁴ circular and semicircular tiles have been found. Some having a decorated moulding on one side were discovered at Caerleon,⁵ and at Castor.⁶

The next most common form were the roof tiles, the *tegulæ* (from which our English word *tile* is derived), the flat bricks we have just been describing being the *lateres*. These *tegulæ* are more frequently found with impressions of stamps, than any other kind of tile, and it was one of this kind found at Leicester that bore the stamp of the 8th Legion—a legion of which we have no record that it visited England at all, as it was stationed in Germany.⁷ They are oblong and square, varying from 15in. by 11in., to 18in. by 14in., and the sides are turned upwards to form flanges, in such a manner, that while the upper part of the tile is broad, the flange is narrow, the reverse of this being found at the lower part; moreover, the flange is notched at either end, to permit of the narrow portion of the upper tile overlapping, and fitting close to the broad end of the tile below. In moulding these tiles, the flanges appear to have been formed after the

1 This is the opinion of Mr. C. R. Smith. In *Journal of Archaeological Institute*, vol. 2. p. 316, and in *British Archaeological Association Journal*, vol. 21, pp. 173-4, 234, 279, *et seq.* there are many references to these Colchester tiles. Rickman, in *Archæologia*, vol. 26, p. 31, remarks, that "it is not easy to discover whether the Roman bricks," found in church walls, "have been used before, and are the ruins of a former building, or were made for the purpose, and used new."

2 C. R. Smith's *Catalogue of his Museum*, p. 53.

3 Rudder's *Gloucestershire*, p. 334.

4 Parker's *Glossary of Architecture*, art. *Brick*.

5 *Isca Silurum*, plate 22.

6 *The Durobrivæ of Antoninus*, by E. T. Artis, plate 14.

7 *British Archaeological Association Journal*, vol. 19, p. 46.

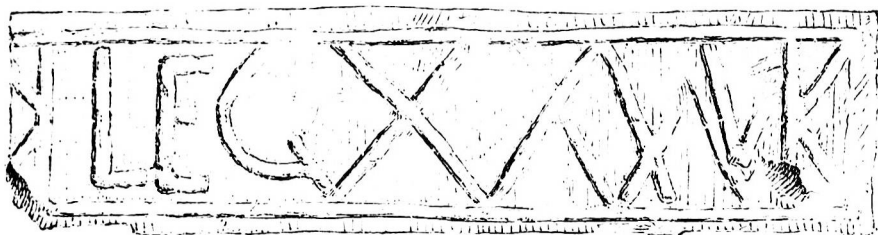
broad portion, the size of which was probably limited by a ridge of wood on either side, which also moulded the outer faces of the flanges. The upper and inner faces of these latter are very frequently found slightly grooved, by the moulder's thumb and fingers having been passed from one end to the other several times; after this, the notches appear to have been made, by cutting away portions of the flanges, with some rough cutting instrument.* They are rarely found decorated, the nearest approach to ornament being usually a semicircular mark at one end, apparently made by the fingers of the moulder.

When used for roofing purposes they were arranged in vertical rows parallel to each other, those below being overlapped by those next above, to the extent of the notches. The line of junction, however, of the various rows was incomplete, and, to make this secure, half round tiles, called *imbrices*, were so placed as to cover over the flanges of two contiguous *tegulae*, with their line of joint: and, like the *tegulae* they were made larger at one end than the other, so as to permit of the upper overlapping the next lower one.† From the large quantity of fragments of these two kinds of tiles, found in the rubbish at Bridge street, there is but little doubt, that they were employed in the construction of the roof to the original buildings. Two of these fragments were impressed with the stamp of the 20th Legion.

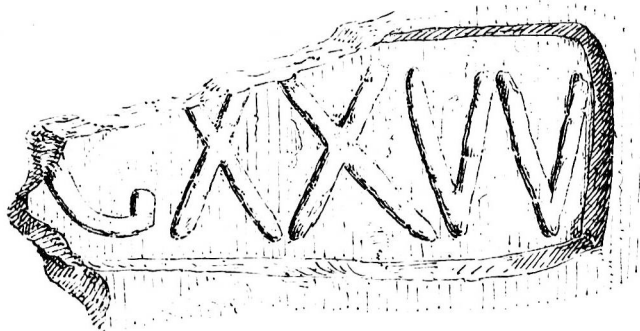
It is very evident that, along the lower edge of the roof so formed, an ungainly, as well as an unfinished appearance would be presented, by the section of the line of opening between the two kinds of tiles; to obviate which, it was customary to give the termination of each ridge an ornamental appearance, by a variety of architectural decoration called an *antefix*; the front face of which usually bore some figure or ornament in relief. Many examples of these have been discovered in various parts of Chester, although none amongst the Bridge-

* In the plate of the *tegulae* showing the impressions of dogs' feet, it will be noticed that, in making the lower notch of the left side, the knife has left its mark on the body of the tile.

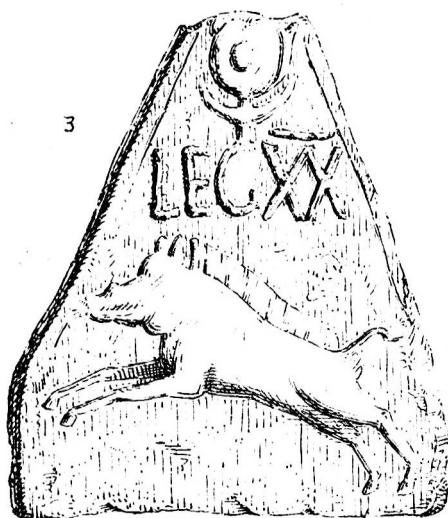
† Unlike them, however, in their broad portion being placed below instead of above. "Many of the houses of China have the roof covered with semicircular tiles resembling the Roman *imbrices*. They are ranged with their concave side uppermost, to serve as channels for the rain. Other tiles are then laid with their concave side downwards, so as to hide the joinings of the tiles. It is believed that this plan was derived from the use of split bamboos, as is customary among the Malays." (Syer Cuming, in *British Archaeological Association Journal*, vol. 16, p. 359.)



1.



2.



3.



4.

LEGIONARY MARKS 1, 2, (SIZE OF ORIGINAL) ON TEGULAE —

FOUND IN BRIDGE ST. CHESTER IN 1864. vol. 6. 20.

ROMAN JEWELLERS 3, 4 — FOUND IN CHESTER — NOW

IN THE MUSEUM OF FRED^R POTTS ESQ. (vol. 6. 27)

(engraved 1872)

street remains.* It appears highly probable that in England the rain descended from the roof direct from the *tegulae*; but in the great classic cities, it is known that there was a *canalis* or gutter, from which the rain water was discharged, through openings therein, usually made to represent the heads of animals, particularly that of the lion. In the house of the Tragic Poet at Pompeii, several representations of frogs in terra cotta were found, which Sir William Gell describes as being "evidently hollowed so as to serve for spouts to the roof of the portico."†

This form of roof covering is still common in Italy at the present day, and at Pompeii is used to roof over some of the ancient remains there. There seems to be but little doubt, that it still exists in England under the degraded form of the common *pantile*, so general in use before the prevalent employment of slates, and which is evidently a combination, in one tile, of the Roman *tegula* and *imbrex*.

In Roman Britain, this was the most common kind of roofing employed in the midland and southern parts, whilst in the northern districts, and in most places where thin *laminæ* of stone were obtainable, another form was in common use, consisting of slates at the stations on the Wall and at Cirencester, of micaceous sandstone at Bath, Wroxeter, and Caerleon, and in the Isle of Wight of a material similar to Portland stone;—but whatever the kind of natural substance employed, it was cut into the form of elongated hexagons, the long axis downwards, having at the upper angle, a hole for the nail by which it was fastened to the roof timbers. The nail used was of the clout form, and is often found still remaining in the hole. Placed in position, these slabs so overlapped each other as to form a series of squares, with the angles downwards, and when formed of micaceous sandstone, they must have presented a very glistening appearance in the sunshine. At Bath they averaged in weight 5 lbs. each, and measured about 1 ft. wide and 18 in. long.‡ This kind of roofing is still to be met with in use at Trèves.

The *tegulae* are occasionally found to construct the channel of a

* Several of these are preserved in the collection of Mr. F. Potts, and are ornamented with the figure of a boar, over which are the letters LEG. XX, the whole being partly, or completely, transfixd by the pole of a *labarum* with its terminal ornament. One is represented in the plate facing page 423 of vol. 1 of our Society's *Journal*; two others form illustrations to the present paper; and one is figured in the *Journal* of the *British Archaeological Association*, vol. 5, p. 231.

† Gell's *Pompeii*, vol. 1, p. 169.

‡ Scarth's *Roman Bath*, p. 123.

drain, as at Wroxeter;¹ whilst the semicircular *imbræx* at Towcester appears to have answered a similar purpose.²

In several places in England, Roman tombs have been discovered built of roofing tiles; a triangular space, enclosing the urn, &c., being formed of two rows of inclining *tegulæ* towards each other, all the joints being covered with *imbrices*. Several examples have been disinterred at York, and are figured in Wellbeloved's *Eburacum*. Another from the same locality, found in 1845, is now in the Museum of the late T. Bateman, Esq., at Yolgrave, in Derbyshire, and was of large size. It consisted of 21 of these *tegulæ*, each measuring 21in. by 15½in. It contained a skeleton, the skull of which rested upon a semicircular tile—in this instance all the tiles bore the stamp of the 6th Legion ("LEG.VI.VIT.P.F."); the head-quarters of which, were at York. Similar tombs, over soldiers of the 8th Legion, have been found at Strasbourg. In Chester, during the last few years, several tombs of this description have been unearthed,—the first was situated in the Infirmary field, and was of small size, being formed of three *tegulæ* on either side.³ Others were subsequently found in the same field. One was also discovered immediately *within* the Roman portion of the City Walls, just behind the Dee Stands.⁴

In a cemetery in Essex, the Hon. R. Neville found a wall built of stones and mortar, and faced with "large square Roman flanged tiles, with the flanges turned inwards, so as to present a smooth, sloping surface," lying close to which were two skeletons.⁵ Whilst in an example found in London, these roof tiles had served the office of covers to a grave formed in concrete.⁶

Tegulæ have been found forming part of the ceiling of the hypocaust in London,⁷ and at Cirencester.⁸ In the walls at Richborough

1 *British Archaeological Association Journal*, vol. 15, p. 217.

2 *Ibid.*, vol. 7, p. 113.

3 This is the one referred to in the foot-note at p. 17.

4 A few years since a funeral urn of Roman form, of black pottery, 7in. in height, and containing burnt bones, was found in making excavations in Northgate-street, and is now in the Water Tower Museum. Much has been written upon the practice of the Romans in enforcing *extra-mural* interments, yet these Chester instances prove that they were occasionally *intra-mural* also. Similar examples have been found in London.

5 *Journal of Archaeological Institute*, vol. 14, p. 63.

6 *British Archaeological Association Journal*, vol. 20, p. 298.

7 *Journal of Archaeological Institute*, vol. 5, p. 28.

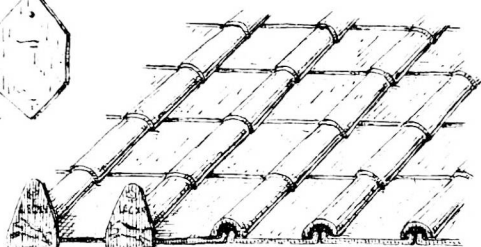
8 Buckman and Newmarch's *Cirencester*, p. 64.

ROMAN.



SLATE AND FLAG ROOF

A. SIX IN. SLATE



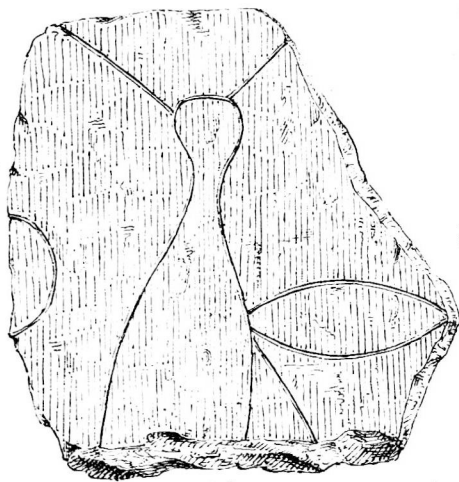
TILE ROOF

B. B. ANTEFIXED *tile 6.20*

FUNERAL
URN OF
BLACK POTTERY.

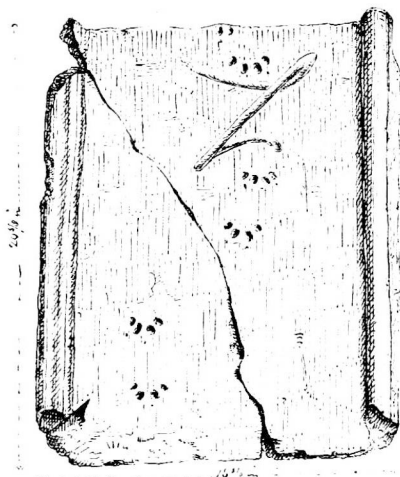


FOUND IN
NORTHGATE ST:
HEIGHT 7 INCHES.
no. 5.20



RUDE SIGURN INCISED ON
A TEGULA.

IN THE MUSEUM OF



TEGULA WITH CURVE FLANG AND
IMPRESSION OF DOGS FEET. *no. 5.20*

F. POTTS ESQ.

no. 5.20

and Lymne in Kent,¹ as well as in those of the villa at Woodchester,² they are met with, having been employed as bonding tiles in lieu of the ordinary flat *lateres*. In a hypocaust of the same villa they were used instead of flue tiles, the flanged portion being turned to the wall.

At a Roman villa at Wheatley, near Oxford, they formed the foundation courses of a small wall; and they had been used for a similar purpose at Preston, near Weymouth.³

A *tegula* of a very singular form, found in Chester, is now in the Water Tower Museum:—it is difficult to assign its particular use. *Coll. & Mus. Chester*

Cylindrical pipes, with sockets very similar to modern draining pipes, and used for a similar purpose, have been found in London.⁴

Flue tiles, as their name implies, were for the purpose of acting as flues for conveying the smoke and heated air from the hypocausts to the walls of the apartments, &c., requiring to be warmed, and ultimately for permitting the discharge of the smoke into the external air. As generally found, their shape is that of a four sided, oblong, hollow square, having usually one or more small lateral openings:—their general dimensions are 16in. to 20in. long, 6½in. deep, and 4½in. wide. One or more of their surfaces is invariably marked with patterns of different kinds, sometimes consisting of a simple diamond form, cut in by some blunt tool; and sometimes of a series of parallel lines, straight, or more frequently waving, made by some tooth shaped instrument. In London, and the South parts of England, they are frequently found highly ornamented, having been stamped instead of hand marked, as in the foregoing instances—the pattern being sometimes of geometric form, but occasionally representing flowers and foliage, animals, and even the maker's initials. “Upon some found at Plaxtol, in Kent, the word CAMBRIABANTVS is repeated over the entire side,”⁵ whilst others discovered at Silchester were marked “with inscriptions rudely scratched upon the clay before baking.”⁶ Notwithstanding all this elaborate surface decoration, the object was simply to roughen it, so that the concrete, with which it was finally covered, should cling to it with greater tenacity, as the tiles when in position were not exposed to view.

1 C. R. Smith's *Antiquities of Richborough*, pp. 34–255.

2 Lysons' *Account of Roman Antiquities discovered at Woodchester*, plate 26.

3 *Journal of Archaeological Institute*, vol. 1, p. 354.

4 C. R. Smith's *Roman London*, p. 116.

5 *Ibid*, p. 115.

6 Wright's *Archaeological Album*, p. 152.

Some portions of flue tiles, with a wavy pattern, were found amongst the Bridge-street remains. Flue tiles having two channels are occasionally found. One of this kind was dug up in St. John's Churchyard in 1864. A second example (*vide* plate) was discovered a few years since during the alterations of the premises, partly covering the site of the 'Roman Bath,' in Bridge-street, and is peculiar for having a lateral opening, of 2in. diameter on each side of the front channel, and none in the back one, as though the latter had been intended for conveying a separate supply of heat to an upper room.¹

Other shapes have also been met with:—some large, equal sided, rectangular ones were dug up in London,² and portions of a similar form have been found amongst the ruins at Wroxeter. At Trèves, some of circular form still remain in their original position;³ and at Bath some of a similar kind were discovered which, Mr. Scarth suggests, when two were cemented together, would "form part of a cylindrical column."⁴ At the same city some were also dug up, shaped like the keystone of an arch. *also at Gouda*

The Romans did not scruple to adapt roofing and other tiles to all kinds of building purposes, other than those for which they were originally intended, and we find that flue tiles formed no exception to this rule. For instance, at Cirencester⁵ and at the Roman villa at Hartlip, in Kent,⁶ they had been employed in their hollow state as hypocaust pillars. In London they had been used for a similar purpose, after having had their interiors filled with concrete.⁷ They

1 This tile is preserved in Mr. F. Potts' collection. Its measurements are 11½ in. high, 7 in. broad, and 13 in. deep. Its front surface is rudely incised, of a diamond pattern. At the back part of one of its sides is a rust stain, probably the mark of the iron cramp which secured the tile to the wall. It had last served the purpose of ordinary building material, its interior being filled with concrete; this was the case, also, with the other Chester example mentioned above. In Mr. C. R. Smith's *Roman London*, p. 114, is a woodcut of a double flue tile without lateral openings, the front face bearing a stamped pattern.

2 C. R. Smith's *Roman London*, p. 115.

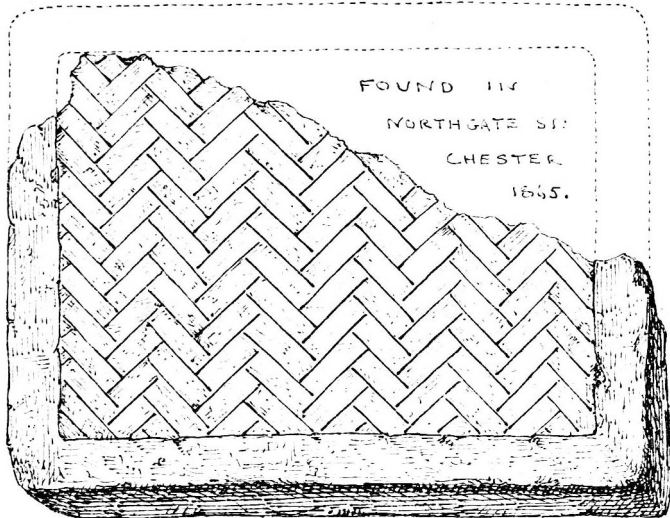
3 *Collectanea Antiqua*, vol. 2, plate 26.

4 *Roman Bath*, p. 96 and plate 36. May not these tiles have been used singly to form a semicircular pilaster on the face of the wall? An example of a square pilaster is noticed in Wright's *Wanderings of an Antiquary*, p. 237.

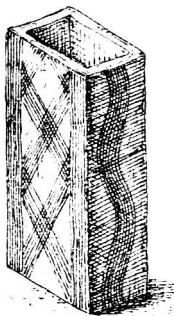
5 *Illustrations of Roman Art in Cirencester*, by Buckman and Newmarch, p. 65.

6 *Collectanea Antiqua*, vol. 2, p. 6.

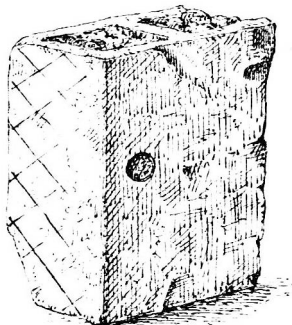
7 C. R. Smith's *Roman London*, p. 116.



HERRING-BONE PAVEMENT. *scale p. 32*

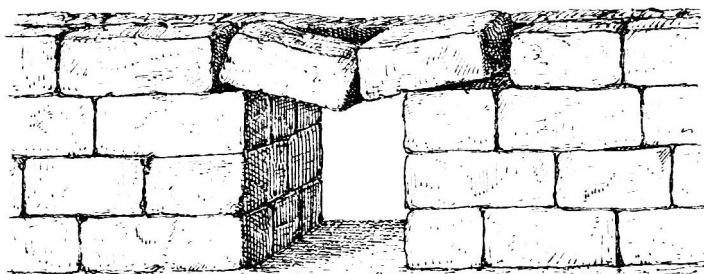


SINGLE.



DOUBLE.

FLUE TILES. CHESTER EXAMPLES. *scale p. 32*



MASONRY WITH SQUARE OPENING. MAIN WALL, BRIDGE STREET, CHESTER. *scale p. 32*

formed the seat of a bath at Hartlip.¹ At a villa in Shropshire,² and at Caerleon,³ they had served the purpose of drains, and, at this latter place, they had also been made use of as ordinary building material in wall construction.

We now pass to a consideration of ROMAN PAVEMENTS, under which heading we include, not only all the floors of the residences, but also those of the court yards, offices, and even of the streets, for it is sometimes difficult to state unto which of these heads we can assign some particular specimen. We will first notice those which were generally, although not invariably, employed for out door use; and the first to be mentioned are those of the main roadways, which were commonly of ordinary *boulders*. Much of this kind of pavement has been uncovered at Wroxeter, and in several parts of Chester also. At the Eastgate, two of such pavements were discovered during some excavations made there—one was three feet below the surface, and was probably mediæval; the second was at a depth of nine feet, and was the original Roman.⁴ At Pompeii, the roadway was paved with thick irregular polygonal flags;⁵ at Caerleon⁶ ordinary squared flags were found in a kind of courtyard; and on the west side of Bridge-street, Chester, on the site of Mr. Welsby's premises, at the south-east corner of the passage anciently known as *Pierpoint Lane*, leading from Bridge-street to the old *Common Hall*, a similar pavement was discovered. Flags were, however, frequently used for the floors of apartments, more especially at the stations at Hadrian's Wall; whilst, at Caerleon, one apartment was "paved with slabs of slate 5½ ft. in length, 3 ft. in width, and from 1½ in. to 2 in. in thickness."⁷

Another description of paving, commonly employed for enclosed courts connected with houses, was known to the Romans as the *spicata testacea* (from its resemblance to a *spica*, or ear of corn), and by the moderns usually called herring-bone pavement—the alternate rows being placed at right angles to each other. The small tiles forming it more nearly approach the character of our bricks, than is the case with any other of the Roman baked clay manufactures, and generally

1 *Collectanea Antiqua*, vol. 2, p. 8.

2 *British Archaeological Association Journal*, vol. 13, p. 176.

3 J. E. Lee's *Notice of Roman Buildings at Caerleon*, pp. 12-13.

4 *Lancashire and Cheshire Historic Society's Journal*, vol. 1, pp. 82-3.

5 *Smith's Dictionary of Antiquities*. art. *Via*.

6 J. E. Lee's *Notice of Roman Buildings at Caerleon*, p. 8.

7 *Journal of British Archaeological Association*, vol. 4, p. 260.

measure about $4\frac{1}{2}$ in. long, by 1 in. thick, by $2\frac{3}{4}$ in. wide. They appear to have been very roughly moulded. Those who have visited Wroxeter will probably recollect the enormous extent to which this kind of pavement was employed; the *basilica*, a large open court, measuring 226 ft. long by 30 ft. wide (now covered up), was wholly paved with it.* In London,† also, it appears to have been common.

In the Bridge-street remains, a small portion of herring-bone pavement was found at the extreme Eastern end of the excavations, intermingled with plain tiles; the whole of this appeared to have been very much worn, and was patched in several places. A great deal of care had been bestowed upon its construction, as the rock had been bared, then sandstone rubble had been spread over it, followed by a thick layer of concrete, upon which the pavement was laid. Its existence enables us to assign this portion of the original site to have formed part of an open court. The only record we possess of a similar pavement having been discovered in this city appears in the pages of Ormerod, (vol. 1, p. 295), where it is stated that in some excavations in 1779, in Watergate-street, a place was found "floored with tiles $4\frac{1}{2}$ in. by $2\frac{1}{2}$ in., set edgeways."‡ Plain square tiles were in very common use for both out and in-door pavements. At Birdoswald,§ some of lozenge shape were found.

We now come to consider the proper pavements of the rooms of Roman houses, which, to use the words of Vitruvius, were "the principal of the finishings, and should be executed with the greatest care and attention to their solidity." It may here be mentioned that a wooden floor was rarely used by the Romans in Italy, whilst in Britain we have not a particle of evidence that they were ever employed by them.

The floors of rooms have been divided into two classes—1. Those made on the ordinary surface of the ground; and 2 those raised from

* In all allusions to the Roman city of Uriconium (Wroxeter), the paper of Mr. Horatio Lloyd in vol. 2 of this Society's *Journal*, pp. 309—28, may be referred to with great advantage. In one of the plates accompanying it is figured a specimen of a herring-bone pavement.

† C. R. Smith's *Catalogue of his Museum*, p. 58.

‡ During the year 1865, in excavating for a new building on the east side of Northgate-street, a very perfect though small specimen of pavement of this kind was exhumed. It measured 32 in. by 21 in., and was found imbedded in a square block of sandstone, in shape and form like an ordinary sinkstone, the elevated edges of which were on a level with the tiles comprising the pavement, to which they formed a margin.

§ Bruce's *Wallet Book of the Roman Wall*, p. 26.

P. G.
C. H. G. M. Ch. to

the latter by small pillars (*pilæ*), so that a large cavity existed beneath, to which the name of "hypocaust" is usually assigned. This latter kind, from the circumstance of its being suspended as it were from the surface of the ground, was called *Suspensura*; but this form of construction affords us no precise clue to the kind of finished surface of the pavement, although, generally speaking, it was of the tessellated kind. At Wroxeter, the only pavements of this class that were found did not have hypocausts; whilst at Cirencester,* one room, having a tessellated pavement, was found to have a hypocaust under one portion and not under another.

Whatever the kind of floor to be made, the same general process was used in all, and the greatest care taken in every stage of it. Where there was no hypocaust, the ground was prepared by ramming and beating, to prevent any subsequent sinking, and to secure dryness. Upon this was placed a layer of broken bricks, tiles, rock, or any hard material. From this stage the process was the same, whether the floor to be constructed had a hypocaust or not. The next layer was usually a thick one, and generally consisted of 4in. to 6in. of concrete, made of coarsely powdered tiles, small gravel, or *well washed* sand and *fresh* lime. Modern bricklayers usually employ earthy unwashed sand, and lime that has been slacked for many days; no wonder is it, therefore, that their mortar soon becomes friable! Our great railway and embankment contractors have actually had to copy the Roman system of making concrete, on purpose to make their work durable. After the first layer had become thoroughly set and hard, a second layer was spread over it, in which the materials mixed with the lime had been more finely powdered. These three layers, according to Professor Buckman,† were the *Statumen*, *Rudus* and *Nucleus* constituting the *Ruderatio* of Vitruvius.

The surface of this second layer was frequently rubbed smooth, forming the finish of the pavement, as at Wroxeter, where nearly all rooms of the public building uncovered there, were floored upon this plan—resembling somewhat the lime-ash floors used for barns and cottages at the present day, in those counties where lime is plentiful. We have met with no specimens of this kind in Chester. In some places the upper layer was dispensed with, and the layer of *statumen* left by itself, as at Ickleton,‡ and at Mincing Lane, London.§ In

* *Vide* woodcut and description in Buckman and Newmarch's *Corinium*.

† *Ibid.*, p. 69.

‡ *British Archaeological Association Journal*, vol. 4, p. 359.

§ *Ibid.*, vol. 5, pp. 442-3.

others, square pieces of blue slate or stone were imbedded in the surface, as at Caerleon.*

We now have to notice those important and interesting remains of Roman art—the Tesselated Pavements. These may be described as consisting of small pieces of natural or artificial stone or glass, of various colors, strongly cemented together, to form an even floor, with a smooth polished surface. They were generally arranged in some pattern varying from the most simple arrangement of lines, to the highest artistical representation of natural objects. They were in such general use, that Roman remains are rarely unearthed, without some traces of these works of art being found; and, in fact, one of the first indications of the vicinity of a Roman station is the presence in the ploughed land, of the fragments of pottery, mingled with the *tesselæ* of some broken up pavement. It was called by the ancients *opus musivum* or *musiacum*, (hence our word *mosaic*) to distinguish it from *lithostrotum*, which was composed of marbles of various colors, cut into accurate squares, circles, &c., so as to form *accurate* geometrical figures—an attribute not possessed by the ordinary tessellated pavement, which latter, however, was often surrounded by the former, like a picture in its frame.†

The word *tesselated* comes from the Greek, signifying a square or cube, *Tessella* (*Tesserula* also) being its diminutive. So that, literally, tessellated means composed of small squares, cubes, or dies, a description not strictly applicable to the *tesselæ* as we find them; for they have usually an irregular square or even polygonal face (sometimes triangular), more frequently oblong than cubical. But with respect to each of these qualities, as well as to the size also, they vary very considerably in the pattern of the same pavement: the effect of this irregularity having been, to give the Roman artist greater freedom in the treatment of the subject he wished to represent.

The quality of the pavement appears to have determined the general size of the *tesselæ*, which were smallest in the representations of animals and scenes,—larger in the intricate and many colored geometric patterns,—still larger where the colors were limited to two or three, and largest of all in the borders; and vary in size from $\frac{1}{4}$ inch, or even less, to $1\frac{1}{4}$ inches. Those derived from natural sources appear to have been rudely squared by means of a blunt chisel, as the sides are almost invariably rough; the upper surface or face was probably

* *Description of a Roman Building at Caerleon*, by J. E. Lee, p. 12.

† *Smith's Classical Dictionary*, art. *Pictura*.

smoothed before the laying process, so as the better to enable the artist to judge of his progress with regard to effect.

The method of laying the tessellæ appears to have been very simple. After the formation of the *rudratio* floor already described, a thin layer of cement, composed almost wholly of fresh lime used in a liquid state, was spread over a small surface, and the tessellæ were then bedded singly in it, so that all the joints were filled with the cement. The sides of the tessellæ being rough, and their lengths varying, would have the effect of making them set better, and less likely to loosen subsequently. In the case of any pattern or figure, this was first formed, and one or two rows of tessellæ, forming the ground, then followed all its inequalities, after which they were filled in irregularly. When the whole was dry and hard, the surface was rubbed smooth and polished.

They were probably constructed by artists who devoted their whole time to this branch of practical art, as it must have required great tact and patience to have constructed them evenly and correctly with regard to the pattern; moreover there is a wonderful similarity in their construction through all parts of England. Suetonius states that Julius Cæsar carried the materials for making these pavements as part of the military baggage.*

The tessellæ are met with in all colors, the greyish black, white, and red being the most common, but whatever tints were required in the more artistic forms, they always appear to have been obtained. If a natural stone of the wished for color was not to be had, they procured it from artificial sources;—if the material was not obtainable in England, it was imported from the Continent. The *white* tessellæ were composed of chalk, white lias, or white marble, the *grey*, *slate colored*, or *black* of dark colored lias, and the *red* of baked clay (*terra cotta*).†

The *white*, on account of its soft nature, was rarely used by itself, nor was the *grey* or *black*, on account of its dreary appearance; but the two combined were very common, the patterns being usually of simple form, nearly all of the Wroxeter examples being of this kind, as well as those found recently in Chester. The black was frequently em-

* Quoted in C. R. Smith's *Roman London*, p. 51.

† After a careful examination of some of the tessellæ found in Bridge-street, Chester, which Mr. John Morris, the Professor of Geology in University College, London, was good enough to make, he expressed the opinion that the greyish kind were from the lias, "and possibly from Warwickshire;" whilst the white consisted of chalk, and "may have come from Yorkshire or Lincoln, or it might have been cut from blocks of chalk from the boulder clay which covers many parts of the midland counties."

ployed as a border. From the circumstance of the white wearing away more rapidly than the black, the distinction between the two can often be noted, by merely passing the hand over the pavement. The red was frequently employed by itself in common rooms and passages, as at Wroxeter, Isle of Wight, Hartlip, &c., or as a surrounding border to the pavements of better class; in either case the tessellæ were large and coarse. Sometimes coarse white were intermingled with the red.

Pavements containing these three kinds of tessellæ were very common, the pattern frequently exhibiting some knot-work or simple geometric form, as in an example at Wroxeter,¹ and another at Caerleon;² and in these cases the tessellæ were large: one, however, was found on the site of the East India House, London, where the tessellæ were only $\frac{1}{4}$ in. square, and arranged in no very intelligible pattern.³ These were the three prevailing colors, but black, chocolate, cream tint, all shades of red, green, and blue have also been found.

Whenever found suitable, the artists employed materials from the locality, *e.g.* at a Roman villa in Sussex,⁴ Kentish rag tessellæ were used, whilst at Caerwent⁵ they were of sandstone. At Cirencester the dark colored, "judging from an ammonite shell found in one of the tessellæ," were obtained from a band of argillaceous limestone which separates "the bed of lias shale in the Vale of Gloucester."⁶ Burnt clay furnished two shades of red, and one black. Some were probably imported from abroad, as in two kinds found at Wroxeter.⁷

In the highest class of pavements, glass tessellæ were occasionally used. Of this material, some of a blue color were found at Isurium.⁸ Roman pavements exhumed in London have in several instances contained blue or purple, and green glass tessellæ;⁹ whilst at Cirencester,¹⁰ some of a ruby tint were discovered.

With regard to the patterns, they are almost as numerous as the pavements themselves, it being very rare to find two alike. Com-

1 *British Archaeological Association Journal*, vol. 17, p. 108.

2 Lee's *Isca Silurum*, plate 26. A similar one is figured in plate 36 of Scarth's *Roman Bath*.

3 *British Archaeological Association Journal*, vol. 19, p. 64.

4 *Collectanea Antiqua*, vol. 1, p. 92.

5 Paper on *Excavations at Caerwent*, by Mr. O. Morgan, in vol. 36 of *Archæologia*, pp. 432 to 437.

6 Buckman and Newmarch's *Antient Corinium*, p. 52.

7 *British Archaeological Association Journal*, vol. 17, pp. 107-8.

8 H. E. Smith's *Reliquiæ Isurianæ*, plate 18.

9 C. R. Smith's *Roman London*, pp. 57-8.

10 Buckman and Newmarch's *Antient Corinium*, p. 53.

mening with those of a simple chequer, we pass on to simple and then to complicated geometric forms, followed by representations of vegetable and animal life, and inscriptions. At Towcester one was found decorated with red crosses, of which, according to Mr. Pretty,* "there is no doubt of the sacred character of the emblem of the cross," probably "intended for that of Constantine." One at Woodchester contained the words *Bonum Eventum, Biinii C(olite)*. (*Bonum Eventum Bene Colite*) "an admonition to pay proper regard to *Bonus Eventus*, the god of good luck."† The finest pavements discovered in England have been principally on the sites of Roman villas, the houses of the wealthy Romans, as at Woodchester (Gloucester), Bignor (Sussex), East Coker (Somerset), *but some better* Bramdean (Hants), &c., situated at some distance from towns.

The pavements of the latter are frequently found common and coarse in their construction, as in the instances of Wroxeter, York, and Bath, whilst in the single villas in the suburbs, as in the case of Isurium, which appears to have been a kind of large suburb to York, they were pictorial in the highest degree. Very beautiful ones, however, have been found in London, Leicester, Colchester, Cirencester, &c., none of which towns appear to have been large or important military stations.

Many of the Continental examples are much finer than any found in England; one, discovered at Autun, and representing "Bellerophon killing the Chimæra," was exhibited a few years ago in London, and was one of the finest ever seen. Pliny‡ describes a remarkable one made by Sosus of Pergamus, representing an unswept hall, "in such a way as to resemble the crumbs and scraps that fell from the table, and such like things as are usually swept away, as if they were still left by negligence upon the pavement." A most beautiful one was found at Pompeii, the subject being the master of the chorus instructing the actors in their parts.§

These pavements were intended for interiors only, so that, when one is discovered, we at once conclude that it has formed the floor of some covered apartment, in the same way that we look upon the presence of herring-bone pavement as evidencing an open court. It

* *British Archaeological Association Journal*, vol. 7, p. 110.

† C. R. Smith's *Roman London*, p. 53. Plate 8 of Lee's *Isca Silurum* contains a representation of a memorial stone to Fortune and "*Bonus Eventus*;" and the god of "good luck" is mentioned in an inscription found at Durham. Horsley's *Britannia Romana*, p. 296.

‡ Quoted in Knight's *Popular Pompeii*, p. 324.

§ Gell's *Pompeii*, vol. 1, plate 45.

unfortunately happens that whenever the moderns imitate the works of the ancients, they almost always appear to overlook some important point: a striking exemplification of this occurred a few years ago when an attempt was made to pave the area of the New Royal Exchange in London with tessellated work, "when the first frost disintegrated the tessellæ and compelled the adoption of a more suitable pavement."* One of the best modern examples, is at the entrance to the Pompeian Court at the Crystal Palace, and is an imitation of the one found at Pompeii, described in Gell's work (vol. 1, p. 145), as "a black dog spotted with white, * * collared and chained, and in the attitude of barking. The collar is of red leather. Below the animal is inscribed in very legible character, "CAVE CANEM."

Tessellated work was not confined to the floors of Roman houses in Britain. At Chesterton, white tessellæ formed the lining of the lower part of the room of a Roman building.† At Wroxeter, in one room the wall was faced with this work, "instead of fresco painting, the lower edge of which represented a guilloche border, and still remains;" whilst in another apartment the wall was tessellated in a kind of black and white chequer pattern.‡ At the same place the bottom of a bath consisted of white tessellæ, and is about the prettiest thing to be seen among the present remains there. A bath having its floor similarly constructed was discovered at a Roman villa at Box, not far from the Roman station of *Aquæ Solis*.§

Prior to those discovered in Bridge-street, we have but few notices of the discovery of any tessellated pavements in Chester. One "about 5 ft. square was discovered in the year 1803, about 6 ft. below the surface of the earth in digging a cellar in the Nuns' Gardens near the Castle,"|| which appears to have been of a coarse kind. One was discovered in Watergate-street in 1779, which, according to Hemingway,¶ was "composed of black, white, and red tiles, about an inch square." In 1854, during the alterations at Messrs. Becketts' premises in Bridge-street, over the site of the so termed "Roman Bath," a portion of pavement of black and white tessellæ was discovered, a large

* C. R. Smith's *Roman London*, p. 49.

† Artis's *Durobrivæ*, plate 26.

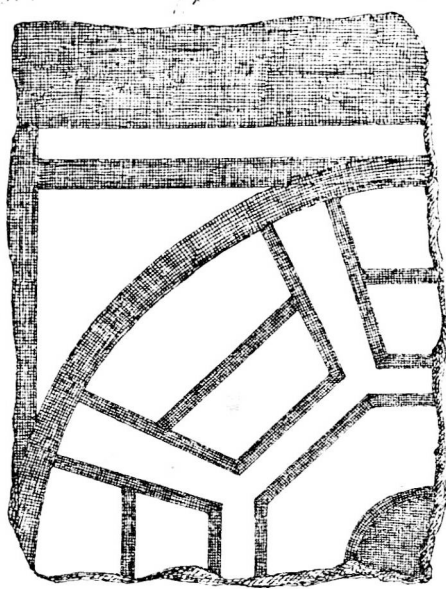
‡ Wright's *Guide to Wroxeter*, 4th edit., pp. 45-52. *British Archaeological Association Journal*, vol 16, p. 159.

§ Scarth's *Roman Bath*, p. 119.

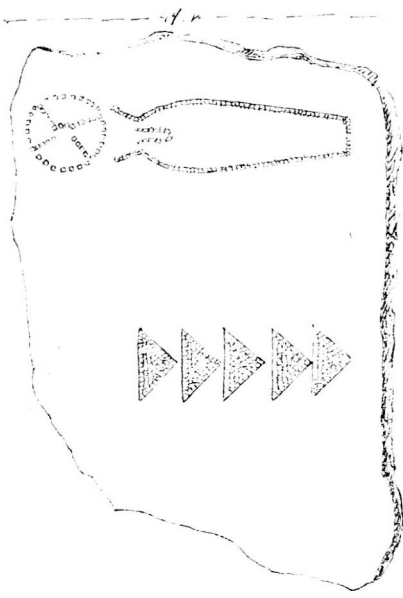
|| Lysons' *Cheshire*, p. 428; and Hemingway's *Chester*, vol. 2, p. 350.

¶ *Ibid*, vol. 2, p. 353.

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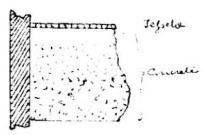


side view of tile.

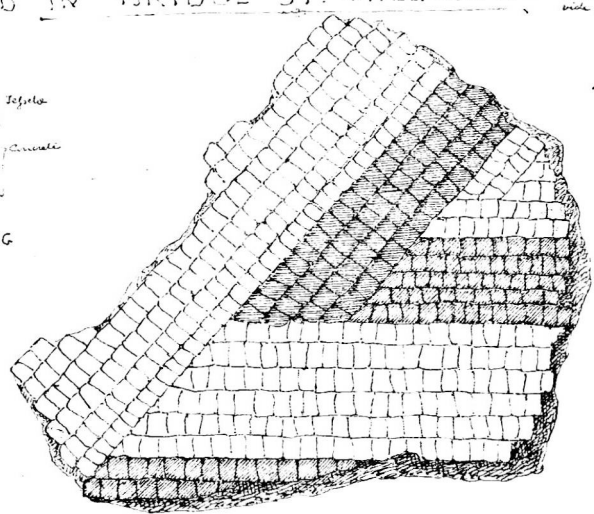


side view of tile.

FOUND IN BRIDGE ST. CHESTER, IN 1863-4. side pp. 37-40.



SANDSTONE SKIRTING
(Section - see p. 38)



FOUND OVER 'ROMAN BATH' in
BRIDGE ST. CHESTER IN 1854. side p. 38.

RESERVED PAVEMENT.

W. G. Tuckfield M.D.

fragment of which is still preserved in the Museum of our Archaeological Society.*

We will now briefly describe the pavements uncovered during the recent excavations in Bridge-street. Commencing with the first room, where so many hypocaust pillars were discovered, although much of the original concrete of the floor was still present, yet there were no signs of tessellæ, although it is highly probable that a pavement of this kind had originally existed, as the concrete averaged 9in. in thickness only; whilst in that of the rooms adjoining, it measured nearly 1 foot. I have already described the concrete of these pavements as consisting of three layers,—in this instance the upper, as well as a portion of the next layers, had been removed. The second room contained the first tessellated pavement that was discovered, and although a fragment only was found, yet it was sufficient to enable us to judge of the design. It consisted of a black circular centre, surrounded by a black octagonal figure enclosed in a black circular band, followed by a straight one, all the interspaces being white; and on the side next the wall, between it and the first room, a broad black border. The fragment measured 10ft. by 7ft., not one-sixth the size of the apartment as exposed to view, and even this small portion was very much shaken and denuded of tessellæ in parts. The tessellæ were black and white, (composed of dark lias and chalk), and each averaged three-fifths of an inch square. Some idea may be formed of the immense number of these that must have been employed, when it is stated that the fragment of this pavement contained nearly 17,000.† The deep black border shows a very common method of filling in round the margin of the finished pattern.‡ The centre was formed by four circles of tessellæ as a border, and the remainder in straight lines.§

* It is mentioned in the *Chester Archaeological Journal*, vol. 1, p. 356. A sketch of it is given in the accompanying plate, in which is delineated with tolerable accuracy the linear arrangement of the tessellæ. Since the delivery of the lecture, another fragment of pavement of similar kind and execution has been found on the east side of Northgate-street, at the north corner of the lower passage leading to the Cathedral. It had been formed on the solid rock.

† One of the pavements of the Woodchester villa, engraved in the large work of Lysons', measured 48ft. 10in. square, and "could not have contained less than a million and a half" of tessellæ.

‡ One of the best examples is shown in the plate, which accompanies Mr. Maw's Paper on the "Pavements of Uriconium," in the *British Archaeological Association Journal*, vol. 17, p. 100.

§ In the Ground Plan of the Remains, this fragment is seen to be about one-fourth of a definite geometric figure, and is placed close up to the south-west

The second pavement was nearly 14½ft. long and 5½ft. broad, and occupied nearly the entire site of the smaller inner apartment. It consisted of broad black bands, varying from 17in. to 21½in. in width, separated by white bands, each 5½in. wide, and bordered by another white band. Its remaining characters were similar to those of the one just described.

The third pavement, although composed of the same kind of tessellæ, was so peculiar in its pattern that I wish to draw especial attention to it.* It was of irregular shape, was 7ft. in its longest, and 4¾ft. in its widest measurements; but, unfortunately, compared with the size of the room, formed a small portion only of the original floor. Its ground consisted of black tessellæ, in which white ones had been inserted in a very singular manner—on one side there were five white triangles, measuring 1ft. in their long axis and 6in. in their short, and bearing a close resemblance to the ornamental borders of some pavements exhumed in other parts of this country. On the opposite side there was a figure, 2ft. 8in. in length, formed of a single row of white tessellæ, shaped something like a mediæval coffin, and containing in its narrow portion, an ampulla looking figure. Above this was a small circle with four irregular spokes, composed of single rows of tessellæ. I must confess that this example has been a perfect puzzle to me, and I therefore can scarcely even suggest an explanation. The white tessellæ may have been inserted at a period subsequent to the original laying down of the pavement. It may have been a mere vagary on the part of the artist, although this is scarcely probable †

There are evidences of another pavement at the East end of the remains, having the same general character as the other three.

* I was not in Chester at the time of its discovery, but very fortunately a gentleman, well versed in Roman antiquities (Mr. John Peacock), was on the spot at the time, and he both measured and sketched it, so that as to the correctness of the drawing now exhibited, there cannot be a reasonable doubt.

† It may be here mentioned as a singular fact that skeletons, which had evidently been interred in a regular way, have been discovered beneath tessellated pavements at Towcester (*British Archaeological Association Journal*, vol. 7, p. 108) and London (C. R. Smith's *Roman London*, p. 58.)

corner, that being as nearly as possible its position at the time of its discovery. It is very probable, however, that it may have slid somewhat from its original site, at the time when the supporting *pilæ* under its western portion were removed, allusion to which has already been made. There was not the slightest clue to the pattern of the pavement which occupied the eastern end of the same room.

MASONRY.—It is not my intention to enter into a detailed description of all the different kinds of Roman masonry, but will first point out the usual character of those met with in England, so that the peculiarities of the Chester examples can be more forcibly shown.

Throughout England generally, as well as on the Continent, all Roman walls, whether of private or of public dwellings, are usually characterised by the presence of two, three, or more layers of bonding bricks or tiles, after every five, six, or seven courses of masonry; and were generally constructed in the following manner. The ground for the foundation having been well prepared by ramming,* a bed of clay, occasionally mingled with boulders, was sometimes spread on the surface; more frequently, however, large blocks of stone, considerably wider than the wall was intended to be, were laid in one or two courses, so as to form set offs. Then commenced the proper facing of the wall, and the facing stones employed were not only well chosen, but they were tooled on the face and well squared, so that the joints fitted closely. They were generally of small size, and uniform in the depth of the beds. Two faces of the wall having been built to a certain height, so as to leave a trough-like cavity in the centre, freshly made liquid mortar was poured in from time to time, and rubble stone imbedded in it, until level with the outside work. Then followed two or more courses of bonding tiles, which were the ordinary plain square tiles, of large size, rarely occupying the whole thickness of the wall; and then fresh courses of masonry. These bonding layers appear generally to have commenced above the level of the ground, and on the Continent to have consisted of a larger number of consecutive rows. The number of layers was greater in various parts, such as the angles, doorways, and windows. Moreover, relieving arches of tiles were frequently erected in the thickness of walls.† Tiles entered largely into the construction of arches, whether of windows, doors, or gateways; which sometimes were wholly composed of them, as at Colchester, and the Jewry Wall at Leicester; or alternating with stone, as at Lillebonne; or at right angles to the radius, as at Fréjus.

* Where, however, the wall was required to be massive, (as in the cases of town boundaries and abutments of bridges,) and the foundation uncertain, piles were first driven into the ground, of which instances have been met with in the City Walls of York and London, and of the Roman bridge at Newcastle (*Pons Ælii*.) Vide C. R. Smith's *Roman London*, p. 18, Wellbeloved's *Eburacum*, p. 51, and plate 1, fig 2; and Bruce's *Wallet Book of the Roman Wall*, p. 47.

† C. R. Smith's *Roman London*, p. 17.

In this manner the Romans constructed their walls in London, Richborough, Bath, Wroxeter, York, Colchester, Lincoln, Leicester, St. Albans, &c.; and they carried the idea of their bonding courses so far, that frequently, when tiles were not obtainable, they employed thin slabs of stone, as in the walls at Silchester,* and of the Amphitheatre at Richborough.† In the limestone walls of Caerwent, there are “four bonding courses of red sandstone, which, when new, would show like tiles;”‡ and in the Pharos at Dover, “when the masons were short of the large tiles which are so plentifully employed in its construction, they hewed pieces of the Folkestone rock into the form of tiles, and used them instead.”§ The employment of roofing tiles for a similar purpose has already been mentioned.

When we turn our attention to the Roman remains of Chester, we at once observe a striking difference in the masonry compared with that which I have just described, the bonding courses of tiles being wholly absent. I have been unable to meet with any description, or statement, of tiles ever having been discovered in any of the Roman walls of this neighbourhood. In those portions of the City Walls which the Rev. W. H. Massie was the first to point out as being Roman, we find that the stones are large and massive, are regularly about a foot deep, and usually twice as long as they are broad, the longest face being 5ft., and the shortest 1ft. 10in., bonded by the longest side sometimes being presented as the face, and at other parts imbedded in the thickness of the wall. The measurements just mentioned have been recently taken, and at the same time the moulding of the cornice was accurately copied, a model of which is now exhibited (vide plate.) Another peculiarity is the circumstance that these stones have not been set in mortar, at all events no traces of any can be discovered. A parallel instance exists at Rome, where the outlet of the *Cloaca Maxima* has an arch of three rings, which (with the wall on either side of it) exhibits no trace of mortar.||

The absence of bonding material is not confined to Chester, the walls of *Isurium*¶ having been similarly constructed; but the best and most extensive example is that of the Great Wall of Hadrian, in which

* *Archaeological Album*, p. 151.

† C. R. Smith's *Antiquities of Richborough*, &c., p. 162.

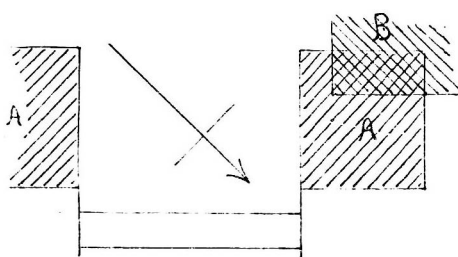
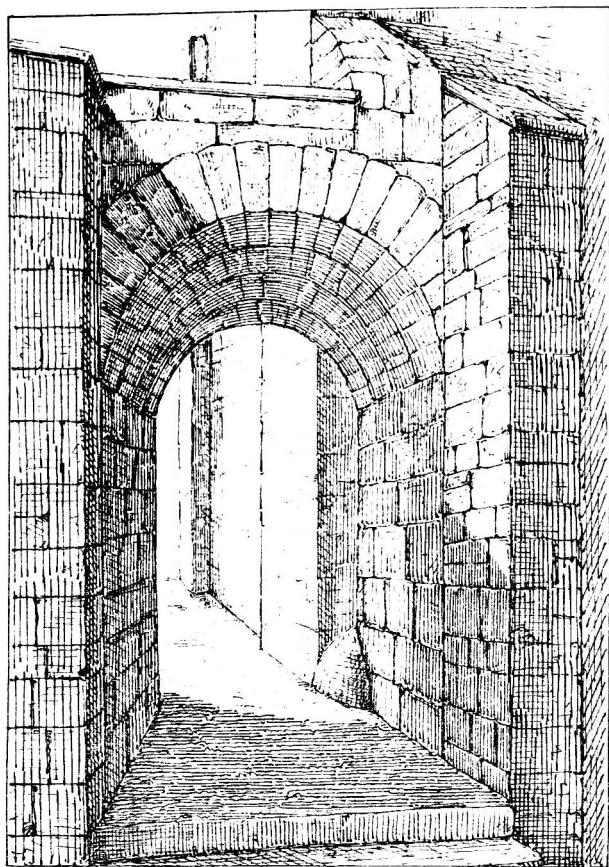
‡ *British Archaeological Association Journal*, vol. 4, p. 254.

§ Wright's *Celt, Roman, and Saxon*, 2nd edit., p. 161.

|| *Collectanea Antiqua*, vol. 5, p. 69.

¶ Wright's *Wanderings of an Antiquary*, p. 246.

VIEW AND GROUND PLAN OF ROMAN ARCH AT CHESTER CASTLE.



GROUND PLAN.

A. ROMAN ARCH, SUPPORTING

B. REMAINS OF JULIAN TOWER (NORMAN)
vide p. 45.



(Engraved by W.D.)

rom one end to the other there does not appear to have been a single tile used*. It is not a little singular, that whilst at Richborough and Lymne the bonding layers were common, at Reculver they were wholly absent.†

The great authority on Roman antiquities (C. R. Smith) states that "in very many instances, when the foundations," of Roman walls constructed with bonding courses of tiles, "have been laid open, the superstructure has been ascertained to have been built upon the remains of earlier walls, the facing materials of which were stones of larger dimensions, without the bonding courses of tiles * * It does not follow that the small squared stones and tiles always necessarily denote a late period; but it may be inferred that when, as at Chester, we find a totally different system of architecture, according in style with that in which, in many instances, is proved to have been of comparatively early date, such work must be early also. We may, therefore, look upon what is yet left of the walls of Chester as affording an example of civic fortification not exceeded in antiquity by that of any Roman mural remains in this country."‡ We have further evidence in the circumstance that no early remains have been discovered in any portion of the Chester Roman wall.§ We must not lose sight of the fact that owing to its military importance, and to the number of warlike tribes in its vicinity, it is highly probable that Chester was walled at a very early period of its occupation by the Romans. Hadrian's wall, the age of which we do know, consists, like our local example, wholly of stone, and in each case the length of the blocks is twice that of the breadth, and the thickness uniform. Rickman,|| in noticing this absence of bonding materials, thought that they were not employed when blocks of stone of sufficient size could be obtained.

ROMAN ARCHES IN CHESTER.—Besides the walls, we notice that all the Roman arches of Chester still existing, or of which we have any record, were constructed wholly of stone:—the first one to mention is

* Bruce's *Roman Wall*, 1st edit., p. 83.

† *Antiquities of Richborough*, &c., p. 192.

‡ *Collectanea Antiqua*, vol. 6, p. 43.

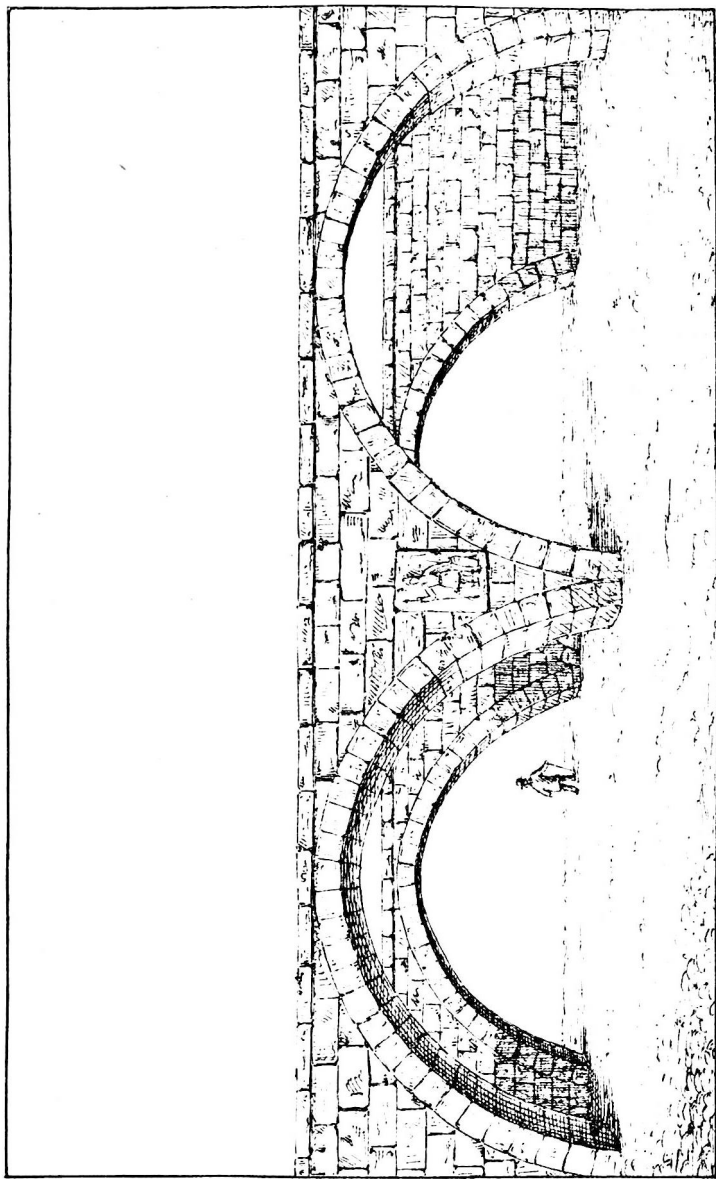
§ These town walls when closely examined into, are often found to contain materials taken from older buildings of another kind, which older materials themselves present the debased style of architecture which belonged to the declining age of the Roman power. Wright's *Guide to Wroxeter*, p. 13. Vide also C. R. Smith's *Roman London*, p. 19; and Wright's *Wanderings of an Antiquary*, p. 131.

|| *Archæologia*, vol. 26, p. 27.

that of the old Ship Gate, which was situated in the line of road to the ford opposite Edgar's Cave, the original position of which rather tends to disprove the traditionary assertion of the walls having been extended in that direction in Saxon times.* Another example was that of the old Eastgate, with its two arches.† Lastly, there is that most interesting one at Chester Castle, where it occupies a most singular position, as it

* I cannot discover any vestige of the original walls, such as those which are said to have been restored by the warlike *Ethelfleda*. I would not willingly detract from the lady's merit; but I must deny her that of being the foundress of the fortifications, and enlarging the city beyond the *Roman* precincts. The form at present is so entirely *Roman*, that any addition she could make would have destroyed the peculiar figure that wise people always preserved in their stations or castrametations, wheresoever the nature of the ground would permit. Pennant's *Tour in Wales*, vol. 1, p. 154. The remains of the old Ship Gate were re-erected in the garden of the late John Finchett-Maddock, Esq., and continue to be carefully preserved.

† There appears to be much doubt as to the form and number of the Roman arches which constituted the Eastgate at the early part of the last century. In Musgrove's etching representing them as they stood in 1768, two only are figured, but no dimensions are given. Hemingway (*History of Chester*, vol. 1, p. 340,) quotes from a MS. appended to a drawing of the gate representing four arches:—"The Roman Gate at Chester was 16 feet high, the breadth nine and thirty feet. This gate was composed of four arches, two in one line; and the distance from each was 15 feet;" and endeavours to reconcile the two by suggesting that the gateway was a double one, and had two arches on each face. On referring however to Stukeley's *Itinerarium Curiosum*, the following passage appears at p. 31 (centuria 2) "Riding under the gate where the Watling Street enters, I observed immediately two arches of Roman work, * * on each side was a portal, of a lesser arch, and lower for foot passengers; for part of the arch is left, and people now alive remember them open quite through; though now both these, and part of the great arch, are taken up by little paltry shops: or rather, the lesser ones are quite pulled down, and even the greater ones are in the utmost danger of falling; for the occupants of those places cut away part of the bottom of the semicircle to enlarge their shops." By this description the Eastgate would present an appearance similar to the one at Autun, engraved in *Collect. Antiq.*, vol. 5, p. 221. But, in plate 65, Stukeley represents "the outside front of the Roman gate of the Watling Street, called East Gate at Chester, as standing 2nd August, 1725," where three arches are shown of equal height and nearly equal breadth, the centre one being $18\frac{1}{2}$ feet in breadth, the side ones each $16\frac{1}{2}$ feet, the entire width of the gateway being 80 feet. Since the foregoing was in type, Mr. Thomas Hughes, one of the Society's Secretaries, has obtained possession of a lithograph (signed "J. Musgrove") showing the Roman Eastgate to have been composed of two sets of arches, two in each set. This is probably the one referred to by Hemingway, whose description it corroborates. A reduced copy of it is given in the accompanying plate.



LOWELL ANASTASIS, FRESH FISH

ENGRAVED BY J. M. 1876

"THE EAST VIEW OF THE ANCIENT ROMAN GATE IN THE CITY OF CHESTER." (THE EAST GATE)

FAC-SIMILE OF A SKETCH BY JOHN MUSGROVE.

assists in supporting one of the angles of that Norman structure, the Julian tower. The span of this arch is 8 feet, it is 6 feet deep, and formed of one ring of stones.*

There is a parallel instance to Chester at Cologne, where not only are the walls free from bonding tiles, but the Watergate of the city which is of undoubted Roman work, is constructed wholly of wedge-shaped stones, like those of the arch at the Julian tower.†

HERRING-BONE WORK.—There is one peculiar form of Roman masonry of which we possess no example in Chester; I allude to what is termed the herring-bone construction (the *opus reticulatum* of Vitruvius,) where all the stones of one layer are inclined in one direction, whilst those of the next are reversed, This method appears to have been adopted when stones of irregular form were used, as at Silchester, where walls, composed in great part of flints, are arranged after this plan;‡ and in central rubbing, as in some portions of the great wall of Hadrian.§ Whilst at Castor (*Durobrivæ*), this kind of wall construction appears to have been common.|| I mention it more particularly, because this kind of wall construction is frequently found in Saxon and Norman buildings, so that taken by itself alone it does not typify any particular period. We see also in the Norman church or zigzag moulding so common in the semi-circular headed ecclesiastical doors and arches of that period, the descendant of the Roman herring-bone work.¶

CONCRETE.—Under the head of pavements, I described the manner in which one kind of mortar or concrete was made. I need hardly say more about its characteristics, excepting that it had remarkable hydraulic powers, was extremely durable, was as hard as the materials which it

* It has been suggested to me that this arch is of Saxon origin, but it has been examined by some of our leading Antiquaries, and pronounced to be Roman. There is the peculiar red mortar of the Romans in the joints; there is an entire absence of hood moulding or of imposts, which would probably have been present had it been Saxon. Moreover there is not another piece of masonry in Chester which has been called Saxon. Rickman could not find one.

† *Collect. Antiq.*, vol. 2, p. 145.

‡ *Archaeological Album*, p. 151.

§ Bruce's *Roman Wall*, 1st edit., pp. 90-1.

|| Artis's *Durobrivæ*, plates 2, 5, and 10.

¶ "What is called herring-bone work, is by itself no criterion of any particular era; whether it may be found in any of the rude masses of ancient British masonry, is a question still to be solved. It is found in Roman, Anglo-Saxon, and Anglo-Norman masonry. It has also been met with in masonry of so late a period as the fourteenth century."—*Ancient Mixed Masonry*, by M. H. Bloxam, in *Journal of Archaeological Institute*, vol. 2, p. 317.

bound together, and so tenacious that the stones themselves will frequently give way before the mortar will separate from them; in fact it is by the existence of this very mortar upon tiles and stones, by which we can recognize the presence of Roman tiles and stones in comparative modern buildings. In this respect it offers a marked contrast to Saxon and Norman mortar, which by containing a large quantity of sand (and probably made like mortar of the present day, with lime which has been slacked for some time) is always found friable, so that the character of the mortar alone enables us to judge of the period in which the building was erected. The durability of the Roman mortar was mainly due to its being carefully burnt, well tempered, and used whilst fresh. Charcoal is occasionally seen in the mortar, derived from the wood used in burning the lime.*

The ordinary masonry mortar or concrete, was made from the same kind of material as that of the pavements, excepting that the tiles were pounded much smaller, so much so in some specimens that the mortar was rendered of a peculiar red hue (as in the instance of the arch at the Julian Tower); from this cause Fitzstephen, the writer upon London in the time of Henry II., describes the Roman foundations of the Tower as having been made with mortar tempered with the blood of animals.† There is another kind of concrete found in wall foundations, where broken stone was used instead of pounded tiles.‡

The portions of the walls found in the recent discoveries at Bridge Street, were of similar construction to all others of the Roman period hitherto found in Chester; but it unfortunately happened that all, or nearly all of them, were not so high as the original level of the tessellated floors, so that those which were exposed during the excavations, were in reality foundation courses only, and afford us no precise data for judging as to the character of the superstructure. None of the walls

* Bruce's *Roman Wall*, 1st edit., p. 88.

† C. R. Smith's *Roman London*, p. 16.

‡ "One cause of the durability of their erections is the excellence of the mortar which they employed. If we had studied their method of making and using it, our buildings would not have the tendency to fall to pieces which they have. * * The necessities of our present railway system have compelled our engineers to pay attention to the subject of mortar, and in all our great works a material is now used as good as that which was prepared by the Romans; but a study of antiquities would probably have caused the revival of this important part of the craft of a builder to have been earlier effected."—The "Practical Advantages accruing from the Study of Archæology," by the Rev. J. C. Bruce, vol. 14, of *Journal of Archaeological Institute*, pp. 4 and 5.

that I saw exceeded 3 feet in height, nor could I perceive any decided signs of upper set offs, which in all probability must have existed to support the outer borders of the tiles forming the roofing of the several hypocausts. It was additionally unfortunate that no entire apartment was discovered, and there were no data for us to form an estimate of their original size, owing to the existence of the medieval wall which bisected the whole. That this latter was of comparatively modern erection is proved by several circumstances, notwithstanding the apparent anomaly that the stones of which the wall is built are well squared, and have a strong Roman character about them. It is probable that they were not only of Roman origin, but were obtained from the very ruins of the Roman building over which they had been erected. The mortar, however, was certainly not Roman, being loose and friable. Again, the wall in question was bonded into a cross wall, which did not tally with the site of the Roman foundation below. But perhaps the strongest reason was to be observed at its base, for in the first room where so many hypocaust pillars were discovered in situ, the wall was actually built, in two places, *upon the concrete of the floor supported by the hypocaust pillars*, and two other rows of these pillars existed beneath and beyond (*i.e.* on the south side of this wall), clearly shewing that the apartment in the Roman period must have been larger than that which was uncovered during the recent excavations. Moreover, the wall between the portions so supported, was built *upon loose rubble*, a proof of its erection having taken place long after the Roman period. I can find one notice only of a tessellated pavement having been built over by the Romans; this was amongst the ruins of a villa discovered at Daventry, in Northamptonshire, where a passage had been formed subsequently to the erection of the building, the wall of which was built upon the pavement, the pattern of which it bisected.*

MAIN WALL.—Now the great main original Roman wall of these remains, ran in a direction almost due east and west, and was parallel to the first row of pillars, from which it was distant 16 feet. It formed the northern boundary of all the apartments that were uncovered, and the portion exposed measured about 130 feet. I have already stated that there were unmistakeable signs of its originally having extended much farther towards the west, whilst at the eastern end of the excavation, the termination of the wall was not arrived at. Its

wall.
4' 0" !

*p. 14.

* *Collectanea Antiqua*, vol. 1, p. 114.

8 ins.
width was 4 feet. It was composed of neatly squared blocks of sandstone, in courses averaging about 8 inches in thickness. These blocks were from 1 to 2 feet in length, their breadth averaging one-half of the length. Their measurements approximate closely to those of the stones used in the erection of the great wall of Hadrian. They were built solid in the courses without any signs of rubbing. The lowest course projected slightly beyond the face of the wall, and intervening between it and the solid rock there was a bed of concrete, which differed from that employed to form the bed of the tessellated and other pavements, in containing broken stone instead of tile.

DIVISIONAL WALLS.—Passing from this main wall at right angles, were the divisional partitions of the rooms, 3 feet 6 inches in width, that of the small inner apartment being 2 feet only. The characteristics of all were similar to those of the main wall.

20 p. 30.
At the north-west corner of the second apartment, a square opening had been left in the lowest courses of the masonry; it was about 2 feet 6 inches wide, about the same in height, and completely perforated the wall; but an examination of it afforded no clue as to its original use. It certainly was not a *præfurnium*, there being no marks of fire, and no flue vents proceeded from it. Nor was there any indication that it was connected with the drainage of the building.

We cannot with any positive certainty, form an opinion as to the character of these walls above the level of the ground, but in all probability they consisted of stone of superior finish to that left in the foundation courses, otherwise it is more than probable that when the site was used as a kind of stone quarry, the lower courses were left, owing to the materials, or the manner in which they had been worked, having been of a less satisfactory character than those above ground; this would partly account for the uniform height of the walls as recently discovered. That bonding tiles were not used is tolerably evident, as, apart from their general absence in all other walls of Roman date discovered in Chester, very few fragments of this class of tiles were found amongst the debris.

SIZE OF ROOMS.—On account of the mediæval wall already noticed, the actual size of the original apartments is not known; the measurements of the portions uncovered were as follows:—the first was 23 by 24 feet; the second, 40 feet long, $13\frac{1}{2}$ feet deep in narrowest, and 24 feet in broadest portion; the third small inner room was 18 by $8\frac{1}{2}$ feet; the fourth 18 by 24 feet; and the fifth 24 feet in breadth, but uncertain as to length.

DOORS AND WINDOWS.—It will be well understood that no remains, of either doors or windows, were found. At Wroxeter, where the walls yet exist for several feet above the ground level, very few doorways, and no windows have been met with; nor have any of the latter been found at Caerwent. Even at Pompeii but few windows were discovered, and those small and high up in the walls;* the doorways that remained tolerably perfect, were for the most part of the square-headed kind. Some circular headed ones were found at one of the stations of Hadrian's wall.

From the large quantities of fragments of flattened glass, found amongst the rubbish covering the ruins of Wroxeter, we may form some crude idea of the large number of windows belonging to the houses. It is somewhat singular, that amongst the Bridge-street remains no glass was discovered;† and as to the manner in which the apartments were lighted, we really know nothing. The probability is they derived the light from the roof, more particularly in the case of the small inner apartment, unless indeed a small court or atrium existed on its south side, which is by no means unlikely. This method of lighting is the more probable, as, although on the Continent, at Pompeii for example, an upper story was known to have existed in some houses, in Britain no trace of one, or of stairs to one, has yet been found.

WALLS OF APARTMENTS.—The inner walls of apartments were generally covered with stucco work, of tolerable thickness, composed of lime, sand, pounded tile, &c., similar to mortar, excepting that, according to Vitruvius, (book 7, chap. 2), the lime instead of being employed fresh, as when made into mortar, was tempered for a long time beforehand. It was laid on in several coats, the last of which was of a much finer and better description than the others, and whilst in a moist state, was ornamented with painted devices, forming a durable

* At the station of *Borcovicus* (Housesteads) on the Great Wall of Hadrian, Mr. C. R. Smith discovered the remains of a small Roman house, containing a doorway and two small window openings. An engraving of it appears in his *Collectanea Antiqua*, vol. 2. p. 188.

† The window glass, as made by the ancients, was *cast in plates*, whilst that of moderns is *blown*. Much interesting material on the manufacture and uses of glass by the Romans, may be found in C. R. Smith's *Collectanea Antiqua*, vol. 1, pp. 1 *et seq.*; vol. 2, pp. 16 to 18. Gell's *Pompeii*, pp. 90, 96 to 100; and a paper by Mr. Cuming in the *Journal of the British Archaeological Association*, vol. 17, which contains the following passage at p. 58:—"Though the Romans sometimes glazed the windows of their villas, glazing to any extent was certainly not much in vogue until long after the Roman rule had ceased in Britain."

fresco painting. Judging from the fragments discovered in London and elsewhere, particularly on the sites of Roman villas, the paintings were frequently of the highest artistic character. The elaborate frescoes of Pompeii are of the same class.

At Sens, in France, is a sepulchral monument to the memory of a Roman painter, containing a bas-relief, showing the method of decoration of a corridor in fresco painting, where, on the same scaffold, are seen the painter and the plasterer, the latter, laying or floating on the last thin layer of stucco, which is being painted by the former.*

In such vast quantities were the remains of mural paintings discovered in London a few years since, that Mr. C. R. Smith saw "carts literally laden with them carried away as rubbish."† Wroxeter, Corinium, and the majority of Roman sites, usually exhibit plenty of evidence of the extensive employment of this highly decorated stucco work; and it may at first appear singular, that no traces of any, were found amongst the remains in Bridge-street; but when we take into consideration, that owing to the highly tempered state of the lime, wall stucco becomes more easily disintegrated by damp, exposure to the air, and frequent disturbance, than any other Roman building material; we can easily understand that whilst at Wroxeter, portions of this stucco still retaining its bright painted surface, may be found amongst the rubbish, which has remained in a comparatively undisturbed state, ever since the original overthrow of the town; in Chester, on the contrary, it may long since have disappeared, owing to the frequent disturbance of the site.

We have sufficient reason for believing that some of the rooms of the Roman building in Bridge-street had sandstone skirtings, as in a fragment of the border of one of the tessellated pavements, (now at the Museum of the Water Tower), there still remain portions of two stone slabs, imbedded at right angles to the pavement, and projecting above its surface. The employment of stone for decorating the internal walls appears not to have been uncommon in Roman times; for instance, at Richborough, some portions of marble moulded skirting were dug up;‡ at Chesterton "thin slabs of Atwalton linch marble." (obtained from beds near Castor) formed the lining of one of the rooms;§ whilst in

* For an illustration and account of this most interesting monument, *vide* C. R. Smith's *Roman London*, p. 61.

† *British Archaeological Association Journal*, vol. 4, p. 362.

‡ *Antiquities of Richborough*, &c., p. 48.

§ Artis's *Durobrivæ of Antoninus*, plate 26.

London, thin marble pilasters, employed evidently for internal wall decoration, "have been repeatedly met with."*

ROOF OF BUILDING.—That it was formed of tiles (*tegulæ* and *imbrices*), the abundance of the fragments found amongst the debris, proves satisfactorily; and that each ridge wall terminated with an antefix is more than probable.† A roof of this kind must have been very heavy, and necessitated the employment of a massive frame work of wood. An iron nail, with a large clout head, and measuring twelve inches, found beneath one of the capitals, may have been one originally employed to fasten the roof timbers together.

COLUMNS.—We now have to describe the columnar remains, the most important in an archæological point of view, of all the Bridge-street discoveries.

Into the history of columns it is not my intention to enter, but we will at once commence the description of our local specimens. I have already briefly stated, that there were discovered the remains of two rows of red sandstone pillars (ten in each row), in a line almost due east and west, parallel to each other, and to the main wall of the building. We will first describe the attributes of a single pillar, and then compare it with that which is looked upon as the type of the particular order to which it belongs, which I may at once state was that of the Corinthian. Commencing at the ground level, was first noticed, below the base proper, a large roughly-hewn square mass of sandstone, measuring 4 ft. 4 in. to 4 ft. 5 in. square, and 1 foot thick, which had been laid in a singular manner. It appears that after the rock had been denuded of all soft material, a square excavation (deeper at the sites of the pillars at the eastern, than of those at the western end, on account of the inclination of the ground) was sunk in the rock, and a layer of stone-concrete spread out, in which the square block was bedded; in this respect, agreeing with the construction of the wall foundation; it did not therefore rest upon the maiden rock. A similar bedding of concrete was found under pillar bases in Commonhall-street.‡ Upon this square foundation, rested the proper base, which

* *Collectanea Antiqua*, vol. 1, p. 139, and plate 48.

† A reference to one of the accompanying plates will point out the general arrangement and appearance of the roof.

‡ Mr. C. R. Smith in his Paper on the "Roman Remains of Chester," in the *Journal of the British Archæological Association*, vol. 5. p. 230, records the following discoveries in Commonhall-street:—"Up the centre, a row of foundations formed of concrete (broken marble stones in hard mortar), about 9 feet apart,

varied from 1 foot 9½ inches to 1 foot 11 inches in height, and consisted of an upper small, and a lower full and bold round moulding (*torus*), separated by a hollow moulding (*scotia*), between which and the lower torus, was a small flat band (*fillet*), the whole resting upon a base (*plinth*) 3 ft. square. These were the main features of the mouldings, but they varied very considerably as to dimensions, in the different examples. In some instances, the two *tori* were almost identical in depth, whilst in others the upper one was reduced to very narrow dimensions; the form and depth of the *scotia* differed widely in each instance, and in one (No. 9) was not hollowed at all. I must not omit to mention, that on the upper, as well as on the lower surface, were large square holes, centrally placed, to which I shall refer again presently.

Now if we compare this with the proper Corinthian base, we shall find the latter a more complicated one, the upper and lower round mouldings, being separated by a number of minor rounds and hollows, the great noticeable feature being, that *all the mouldings with one exception are separated by square fillets*. There is however another classic base, called *the Attic*, which was commonly employed with all orders, except the Tuscan, and consisted of two *tori*, separated by a *scotia*, with square fillets between all the mouldings, and the majority of Roman bases found in England are of this type; amongst which I may more especially mention those discovered at Bath, Durobrivæ, Woodchester, and Wroxeter,* and also those found on the west side of Bridge-street a few years since, which latter had the peculiarity, not uncommon to Attic bases, of being destitute of a plinth. Excepting in the smaller size of the upper torus, the bases so recently discovered in Bridge-street, approximate to those of the Attic type,—the great difference, however, consists in the absence of all the fillets but one, which are present in the classic examples. In point of fact, it appears to be the rule, that as Roman architecture became more debased in its character, so the number of these fillets became less, until their employment ceased altogether, upon the introduction of the mouldings peculiar to Gothic art.

* Bases of various kinds have been discovered at Caerleon, Isurium, Cirencester, Ickleton, and Brough in Yorkshire.

all in a line, and about 10 feet deep, presenting the appearance of having supported columns. A large square block of stone, 4 ft. 2 in. square, 16 in. deep, without lewis holes, on a bed of concrete."

SHAFT.—The shafting in the ancient Corinthian pillars was almost invariably fluted; * not so our Chester examples, which were quite plain, and had been tool-picked, and tapered from the base to the capital, diminishing from one-sixth to one-seventh; at the lowest part they varied from 2ft. 2in. to 2ft. 6in. in diameter, the majority being about 2ft. 5in.; the average diameter at the upper part was 2ft.

Several unbroken lengths of shafting were exhumed, and they were all of one uniform length, viz. 7ft; but neither their upper or lower junction surfaces, contained any hole similar to that of the base already described. It will be observed that the shaft joins the base abruptly, whereas in Classic examples the junction is effected by a graceful moulding (*apophyge*), a character never found in Gothic Architecture. In our local specimen it was evidently omitted, because the base, compared with the model, was of less diameter, so that there was really no room for this moulding; that it was not forgotten, is proved by the fact, that where the capital joined the shaft, a hollow moulding of this kind had been attempted.

CAPITAL.—The Capitals had some peculiar features, which we shall better understand by first briefly reviewing the characteristics of the true Corinthian form.† Its shape is that of a reversed bell, and commencing from below, we find two rows of acanthi, eight in either row, and placed alternately with regard to each other. In the upper row, one appears in each centre, and one under each corner of the uppermost member of the capital (*abacus*); from each of these spring double leaves, which again in their turn give origin to a similar number of

* Portions of fluted pilasters and columns have been met with in Richborough, London, and Bath. At Silchester "two large portions of a fluted column, each about three feet in height and nearly two feet and a half in diameter" were discovered.—*Journal of British Archaeological Association*, vol. 16, p. 93.

† The origin of the capital is said by Vitruvius (book 4, chap. 1) to have been due to a certain Athenian Sculptor, who observed an acanthus plant, growing around the sides of a basket, upon which a tile had been placed, the effect of which latter was to cause the leaves to bend forwards, thereby occasioning such a graceful appearance, that the sculptor at once grasped the idea, and embodied it in stone. It is, however, a singular fact, and one which militates against the correctness of this anecdote, that the more ancient the example of this capital, the more unlike its leaves (acanthi) are to those now accepted as the standard; they are fewer in number, and the volutes are absent. A good example is that of the Temple of the Winds at Athens, which approaches in character that of the Egyptian form of capital, from which it is probable the Corinthian order sprung. On the side of an altar to the memory of Flavius Longus, a Tribune of the 20th legion, discovered in Eastgate-street in 1693, and figured in Lysons' *Cheshire*, p. 429, there is sculptured "a vase filled with *acanthus leaves*, supporting a plate of fruit."

volutes, one bending to the centre, and one to the angle of the abacus; above the central ones appear what is called the "flower" of the capital. The abacus is of a curious shape, having its sides hollowed, and its corners chamfered, so that the angular volutes are much longer than those in the centre. The capital is separated from the shaft by a small round moulding, called an astragal, below which is a square fillet, followed by the hollow apophyge. The difference of these mouldings, with those of the Norman capital, will be at once apparent.

Fortunately, on the site of the excavations, there were exhumed two nearly complete capitals, and portions of several others were found, built up in walls, &c., so that of their general characters we are quite able to judge. Respecting the two more perfect examples, one was of the full height of the capital, and measured 2ft.; whilst the second was 17in. only, as one half of the lower row of acanthus leaves, had been sculptured on the upper shaft stone. All the corners of the upper member were in each instance mutilated; the abacus, however, appeared to measure about 32in. across in its narrowest portion, and was shaped like that of the ordinary classic type. The upper surface was remarkably rough, having been rudely levelled with an ordinary pick, *and exhibited not the slightest trace of mortar.* Both the upper and lower surfaces contained large square holes, similar to those of the bases. The first row of acanthi were in each, as regular as the most zealous classic antiquary could desire, beyond this there were great variations from the standard. In No. 1—the shorter example—the acanthi of the second row were irregular, some of them consisting of half leaves only. At each corner two ribs rose towards the angle of the abacus, as though for the purpose of forming a volute; for which, however, there appeared to be no room, or, if one did exist, it must have been of small size. Embedded in the leaves, there were two shell ornamentations on opposite sides, and on the two remaining sides curious banded figures, one of them having the remains of a double spiral—like a flattened volute. Had they been *above* the acanthi they would have answered to the "flower" of the capital.

In No. 2—the full-sized capital—a portion of the neck moulding, or junction with the shaft, still remained. The upper acanthi consisted wholly of half leaves; at one of the angles there was one rib only, instead of two. As in No. 1, there were certain sculptured representations, of which two only had been preserved: one was of a peculiarly capped spiral—the second consisted of drapery something like the folds of a pallium (or cloak,) having on one side the representation of a hand, apparently too large to belong to the figure represented by the drapery.

SCALE 1 INCH TO A FOOT.

FIG. I.

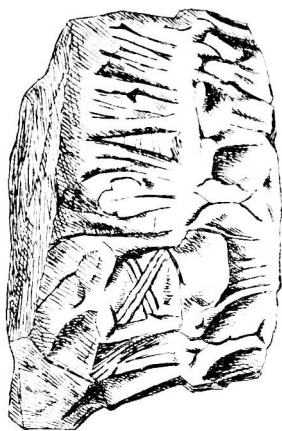
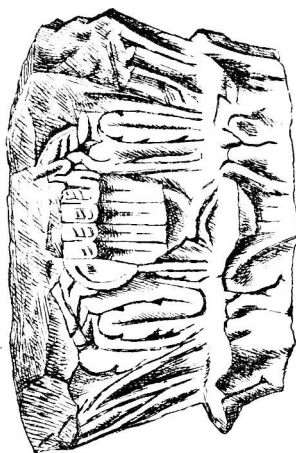
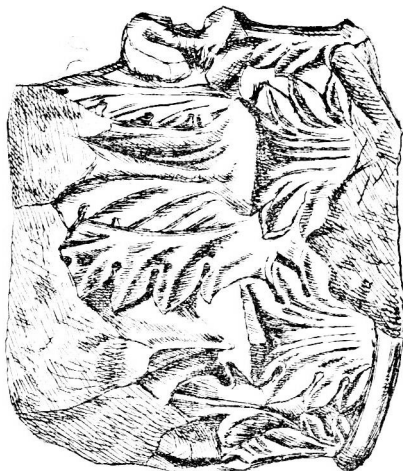
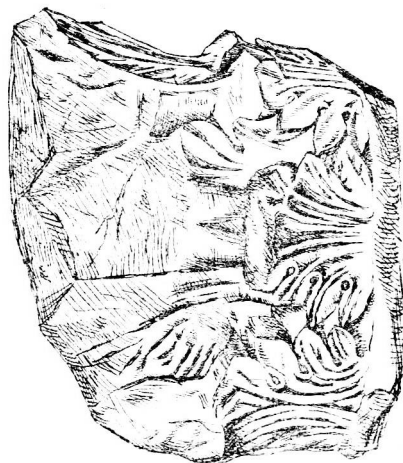


FIG. II.



DETAILS OF THE TWO ROMAN CAPITALS FOUND IN BRIDGE ST., CHESTER. 14

FRAGMENTS OF CAPITALS.—Of the fragments of capitals now exhibited, one shows the corner of an abacus, the edge of which is decorated with a rude fret work, and beneath which appears a knob-like projection slightly ornamented, which answers to the volute. A second exhibits the form of a large bird with its wings slightly open.

We thus see, by comparison with the classic type, that there were many departures from the model, and we must not be surprised at this, when we consider, that in Pompeii itself, long before the founding of the Roman *Deva*, there were capitals in the House of the Dioscuri, which led Sir William Gell to the exclamation, that the Romans “followed no correct model of the Corinthian order.”* The discovery however of the representations of birds and animals in the Bridge-street capitals, is a sufficient proof of their debased character.†

The capitals not only varied considerably with regard to their design, but moreover, the style of their execution proves likewise, that they were the work of different hands. In No. 1., for example, the carving was deep and bold, although the *apices* of the leaves did not project much; whilst in No. 2, notwithstanding these latter projected very considerably, yet the remaining portion was very flat, surface-cut only, and the leaflets were of a different form to those of No. 1. We have already shown that the bases varied considerably, in the measurements of their mouldings, and also that scarcely two of the shafts, where they sprung from the base, were of the same diameter. There is one point I must not omit to mention:—it will be noticed that the length of shafting cut on the same stone as the base, was of different lengths in the various examples, yet the stones forming the bulk of the shafts were of equal lengths,—what was the necessary consequence? That whilst in some cases the shafting stone terminated at the capital, in others it encroached upon the capital itself, a portion of which was sculptured upon it—a style of execution which is not considered workmanlike in the present day, nor probably in that of the Romans. What does this examination teach us? That the pillars were executed by different workmen, possessing various degrees of ability, who were not masons *regularly* employed as such, but soldiers of the legion stationed in *Deva*; and that whilst they were limited as to height, principal measurements, and general character of the mouldings, yet that they were permitted to carry out their own ideas of these instructions, in the

* Gell's *Pompeii*, vol. 2, p. 20.

† Vide remarks on the Roman column at Cussy, Maine, in C. R. Smith's *Collectanea Antiqua*, vol. 5, p. 207, *et. seq.*

way that each thought proper. Capitals very similar to these Chester examples, have been discovered on the sites of other Roman Stations. One was found at Cilurnum;* one of larger size and better workmanship at Bath;† and others still larger, at Cirencester and Silchester.‡

Fragments of pillars have been dug up at various times in different parts of Chester. In 1851, a Corinthian capital was exhumed in Handbridge; whilst excavations in Commonhall-street, Stanley-street, and Crook street, have yielded several bases and other portions of pillars.§ Four bases were found in their original position on the West side of Bridge-street, a year or two since.||

What was the probable height of these pillars? Two Chester architects (Mr. Hodgkinson and Mr. Lockwood), by whom the remains were repeatedly examined, gave it as their opinion, that each pillar consisted of a capital, two lengths of shafting of 7 feet each, and a base; and was between 18 and 19 feet in height. Or to speak architecturally, was about eight times the diameter of the shaft, measured immediately above the base.

Were there originally more pillars than 20? Upon this question hinges, for the most part, the basis of our judgment as to the character and uses of the buildings, the remains of which we are now considering. We will first enquire whether there were more in a longitudinal direction. At the east end they certainly did not extend further, as a wall, at right angles to the pillar, with the remains of an open court, were discovered. Then we turn to the west extremity, and here, at first sight, it would appear as though we were unable to form a satisfactory opinion; but on carefully examining the spot, there was found, at a level *much below the bedding of the pillars*, and at about 12 ft. from the first pillar, on the north side, a mass of unmistakeable Roman stone concrete, the evident foundation of a wall, which at once settled

* Bruce's *Roman Wall*, 2nd edit., p. 159.

† Scarth's *Roman Bath*, plate 2.

‡ *Archæologia*, vol. 18, p. 124, and *British Archaeological Association Journal*, vol. 16, p. 92. Capitals have also been found at Warleigh, near Bath, at Isurium, at Netherhall on the Great Wall, and at Brough, in Yorkshire.

§ *Chester Archaeological Journal*, vol. 1, p. 199, and *British Archaeological Association Journal*, vol. 5, p. 230.

|| Stukeley's *Itinerarium Curiosum* (ed. of 1776, cent. 2. p. 33), contains the following paragraph in the description of Chester:—"The village beyond the bridge is called Henbury (Handbridge), denoting its antiquity. Many fragments, seemingly of pillars and capitals, set for sitting stones before the doors about the city, particularly in Parson's Lane." That these fragments were of the Roman period is very probable, as the locality has always yielded abundance of Roman remains.



ROMAN REMAINS FOUND IN BRIDGE ST. CHESTER.

Base, and fragment of Column, in situ

the question, that the longitudinal number of pillars had not been more than 10. But were there any connecting pillars, between those at either end? During the progress of the excavations, this was one of the points kept steadily in view; as it was felt that any trace, no matter how slight, of the site of a pillar in this position, would afford some clue to the form and structure of the original building, to the construction of which the pillars contributed. But repeated examinations failed to detect any vestige of a base, of stone concrete, or of a square excavation in the rock, such as characterised the sites of the rows. It was, in short, the general opinion of the members of the Society, and of others, who frequently visited the remains, that had any originally existed, they must have left some traces, as the natural ground level of the places they would have occupied, had not been disturbed below that of the other sites: the conclusion was therefore forced upon them, equally with myself, that pillars had never been erected there.

DOWEL HOLES.—I have pointed out the existence of peculiarly shaped holes, in the upper and lower surfaces of the bases and capitals, and which were wholly absent from the stones composing the shafts. Not being an architect, I must confess they were a perfect puzzle to me for some time. They measured from $4\frac{1}{2}$ to 5 in. square, and about the same in depth; had *straight* sides, with their edges roughly rounded or chamfered. They were clearly not *luis holes*; which may be briefly described as holes made by masous in large or heavy stones, of such a character that they are larger at the bottom than at the top, to enable an instrument, called a Lewis or Luis, to be fitted into them, to facilitate the process of lifting them into their proper position in building.*

Now, the holes in the Bridge-street capitals and bases, had *straight* sides, so that the very principle upon which the luis acted was absent;

* It appears to be a general notion amongst engineers, that this instrument was the invention of a French engineer, in the time of Louis XIV., in compliment to whom it received the name it now bears; but under the well-known adage of there being "nothing new under the sun," a writer in the *Archæologia* (vol. 10, pp. 123 to 126) pointed out the circumstance that at Whitby Abbey Church, erected in the time of William Rufus, the large window stones had holes of this description. We can, however, go much further back, and state, that in undoubted Roman work at Richborough (*Antiquities of Richborough*, p. 254), at York (Wellbeloved's *Eboracum*, p. 51.), as well as at several places along the line of the Roman wall (*Wallet Book of the Roman Wall*, pp. 75, 79, 139.), luis holes have been discovered in the stones, so that the Grand Monarque has no real right to the title after all.

moreover, their size was too large, and they were not deep enough.* Under these circumstances I applied to our late Architectural Secretary, Mr. James Harrison, and he at once explained their use. It is evident, that in the process of carving capitals and bases, unless the stone be placed in such a position as to enable the sculptor to carry on his work in a comparatively easy position, and to turn it round readily, his task would be one of much difficulty. This is effected by sinking square holes, in the upper and lower surfaces, fixing a square piece of timber in each, so as to form a rude axis, which is then mounted on two strong uprights. The employment of *dowel holes*, as they are termed, by the Romans, is thus interesting from the fact, that the same plan is followed at the present day amongst modern masons.†

METHODS OF HEATING.—We will now briefly consider the methods adopted by the Romans for heating their houses.

PORTABLE BRAZIER.—The 1st, was by means of portable furnaces or braziers, a method still adopted in Italy, Spain, and some parts of France. A remarkably fine brazier was discovered in the Tepidarium at Pompeii, but no example has been found in England.‡

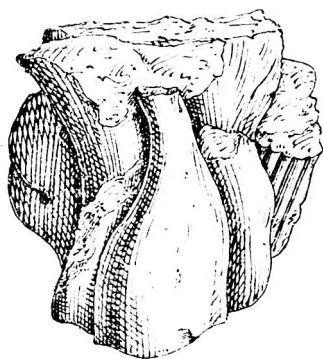
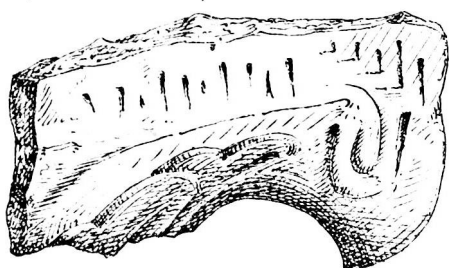
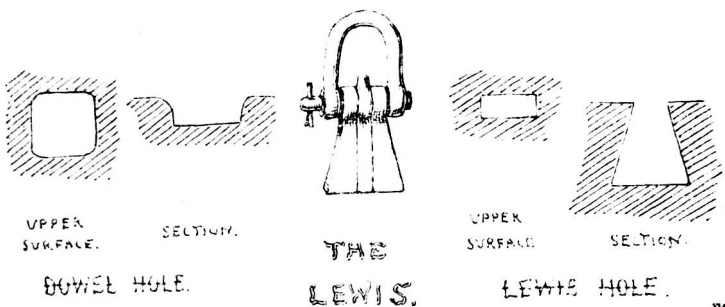
The 2nd was by open fires, in a fixed kind of furnace or fire-place, alluded to by Suetonius and Horace.§ The only examples of this

* Holes, of similar dimensions and character, were noticed in a base dug up in Commonhall-street, Chester (*British Archaeological Association Journal*, vol. 5, p. 230); and at Bisley, in Gloucestershire, two bases were discovered, having holes 6in. square and 4in. deep (*Journal of Archaeological Institute*, vol. 1, p. 44).

† These dowel holes appear occasionally to have been employed, to assist in keeping the large stones in position, by a tenon of wood or metal, fitting the holes of two contiguous blocks; thus, in the description of the Great Temple at Baalbek, by the Rev. J. C. M. Bellew (*Temple Bar Magazine*, vol. 1, p. 374), after alluding to the shafts of the pillars being 55ft. 4in. high, and each 22ft. in circumference, yet, although of such enormous dimensions, consisted of only three blocks each, which “were coupled together by metal plugs, let into square mortices, a foot long and a foot broad. The strength of such fastening is exhibited in the fact, that some of the pillars which have been thrown down, and smashed, have remained in firm adhesion at the joining.”

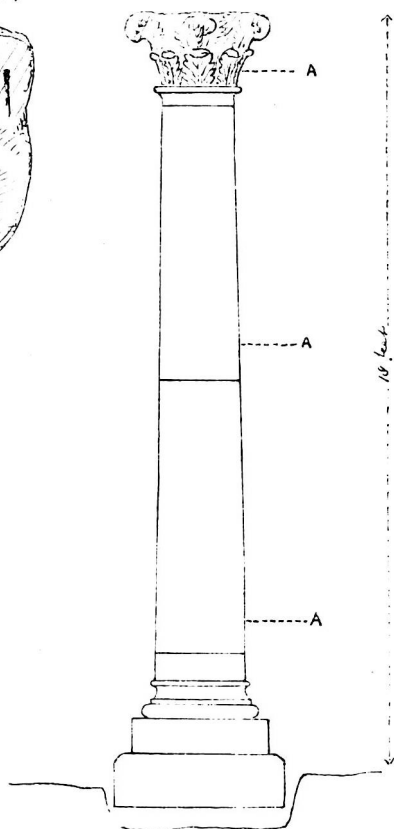
‡ Roman Andirons, or fire-dogs, similar in form to those in common use in England at a later period, have been found at Mount Bures, near Colchester, and at Stanford Bury, in Bedfordshire (*Collectanea Antiqua*, plates 10 and 11). They may perhaps have served the purpose of a brazier, but it has been suggested, with good reason, that they were employed in culinary operations.

§ *Classical Dictionary*, p. 432



FRAGMENTS
OF ROMAN
CAPITALS.

note p. 35



ELEVATION OF PILLAR.

AAA. Varying Lines of Junction. note p. 36

BRIDGE ST. CHESTER. 1863.4.

Emmott & Field, N. 10.

kind found in England, were at a Roman villa at Bignor, in Sussex.* It has been much questioned whether the classic nations employed chimnies such as we do; certain it is that rooms usually were destitute of them, and moreover that the smoke was often a source of considerable annoyance, and led to the images in the hall being called *Fumosæ*, and the month of December *Fumosus*. This nuisance they tried to obviate in part, by employing a certain kind of scented wood, which gave out but little smoke.† There is no reason for doubting that chimnies were known to the Ancients, as some were discovered at Pompeii.‡

HOT WATER APPARATUS.—A 3rd plan is thus described by Seneca :—“We are wont to make *dracones* and *miliaria* of many forms, within which we place pipes made of thin brass coiled downwards, many times surrounding the same fire, in which the water flows through as much space as is sufficient to make it hot. It therefore enters cold and flows out hot.”§

HYPOCAUST.—The 4th, and most common plan of heating, was by the *Hypocaust*, a term which literally signifies *fire beneath*. It will be recollected, that the *Suspensuræ* were pavements, elevated from the

* In one room “on the east side was a hearth formed of eight bricks, each about seven inches square, and a fire-place $21\frac{1}{2}$ inches wide in the front, 17 inches at the back, and eight inches wide. The fire-place was formed by two brick tiles on each side, which had been cramped together with iron, and were placed in the manner of those on the sides of the stove introduced by Count Rumford. This is probably the first open fire-place of the kind discovered in the remains of a Roman building, though it is certain, from various passages in the Roman writers, that other means were employed by the ancients for warming their apartments besides hypocausts.” A similar, though smaller one, was found in an adjoining room (*Account of the Remains of a Roman Villa discovered at Bignor in the County of Sussex*—by Saml. Lysons—pp. 24–5). Some indications of a fire-place were discovered amongst the remains of a villa at Colerne, in Wiltshire (*Journal of Archaeological Institute*, vol. 13, p. 329).

† Gell's *Pompeii*, vol. 1, p. 154, vol. 2, p. 141; and Ritchie *On the Ventilation, &c. of Buildings, as practised by the Ancients*, in *Trans. of the Architectural Institute of Scotland* for 1851, p. 198.

‡ In England chimnies do not appear to have been used until the 12th century. Even as late as 1570 Harrison wrote:—“Now have we many *chimnyes*, yet our tenderlyngs complayne of rheums, catarrhs, and poses, then had we nothing but reredosses, and yet our heads never did ache.” (*Holinshed's Chronicle*.) From which it appears that the introduction of chimnies was looked upon as an innovation.

§ One of the forms of hot water apparatus, patented within the last few years, is a tolerably good copy of the method described by Seneca.

surface of the ground on small pillars ; and the low cellar-like substructures thus formed, were termed hypocausts. From the circumstances attaching to their position, we are better acquainted with the peculiarities of their construction, owing to their remains being more frequently discovered in a less disturbed condition, than those of any other portions of Roman dwellings.

The object of the hypocaust, appears in some instances, to have been solely to have ensured dryness to the superstructure, more especially when the supported pavement was of the better class. Secondly, as the ordinary means for warming the house, more especially of those apartments occupied during the winter months ("Cenationes æstivæ et hybernæ" are mentioned by Cicero in *Epistolis*.) Thirdly, as the method for heating the water and chambers pertaining to baths, whether of a private or public character.

Attention to this simple classification is somewhat necessary, as it is customary, whenever the remains of hypocausts are discovered, to describe them, as portions of a Roman Bath, whereas, in nine cases out of ten, such statement is erroneous ; and its fallacy will be more evident, when it is borne in mind, that fully one half of the apartments of Roman houses, as found in various parts of Britain at different times, bear traces of hypocaustal arrangements.* Mr. C. R. Smith affirms that in "the north of Europe, they seldom had any connexion" with baths at all ;† and it must be borne in mind, that the "delicate bred natives of Southern Europe, Asiatics, or Africans, to pass comfortably the severe winters of the British climate,"‡ required a special provision in their houses, for producing a genial warmth during the winter season ; for which purpose, the system of warming by hypocausts, appears to have universally prevailed throughout Roman Britain.§ At the stations of Hadrian's wall, the evidences of their existence are

* "It is probable that most of the rooms of Roman houses in Britain had subterraneous flues or hypocausts, as the nature of the climate must have rendered them occasionally useful at all seasons of the year." *Account of a Roman Villa at Woodchester*, by Samuel Lysons, p. 17.

† *Collectanea Antiqua*, vol. 2, p. 93.

‡ J. Just, in *British Archaeological Association Journal*, vol. 8, p. 42.

§ This plan of warming houses appears to have rapidly fallen into decay after the departure of the Romans, and to have been succeeded by the Saxon method of an open fire placed in the centre of the living room, the smoke from which escaped through a hole in the roof.

abundant: this is the case even in the small guard chamber of the entrance gateway of *Borcovicus*, a spot, of all others, the most unlikely for any portion of a bath to have been erected.*

Bruce† thus epitomises the purpose they served, in commenting upon some hypocausts at *Condercum*:—"However much the Romans, in their luxurious city, may have been addicted to the indulgence of the hot bath and the sweating room, it may well be doubted, whether, in this cold climate, they would have any great desire for it; or if they had, whether the dread realities of war would allow them to make, on an enemy's frontier, erections so extensive as this has been, for such a purpose. Next to food, warmth would be their most urgent demand; and a more effectual mode of maintaining a uniform temperature in their dwellings could not be devised, than that which the hypocaust supplied."

The construction of the hypocaust varied very considerably, both in materials and details, in different parts of the country. The Roman architect, Vitruvius, in his Chapter on *Baths* (Book 5, chap 10), after stating that the floor should be so constructed with tiles, as to incline towards the furnace mouth, continues his description in the following manner:—"Piers of eight inch bricks are raised at such a distance from each other, that tiles of two feet may form their covering. The piers are to be two feet in height, and are to be laid with clay mixed with hair, on which the above-mentioned two feet tiles are placed, which carry the pavement." In the essential particulars of this description, the Roman hypocausts found in England, agree.‡

These piers, small pillars, or *pilæ*, appear to have been usually constructed in this county, of the ordinary square tiles (*lateres*), with intervening layers of clay or mortar, varying in height from 22 in. to 3 ft., and placed in straight lines at regular distances from each other;

* This chamber, with the adjacent one, had "been warmed by U shaped flues, running round three of their sides, beneath the floor" (Bruce's *Roman Wall*, 1st edit., p. 219.) A somewhat similar plan of flues, constructed of dwarf walls, had been adopted at *Brennium*.

† *Ibid*, pp. 139-40.

‡ As examples may be mentioned, the hypocaust found amongst the Roman remains under the London Coal Exchange, and described in the *Journal of the British Archaeological Association*, vol. 4, pp. 38-45: the one found near Dunlocher Bridge, mentioned at p. 299, and engraved in plate 8, of Stuart's *Caledonia Romana*: that discovered at Wheatley, near Oxford, and recorded in vol. 1 of the *Journal of the Archaeological Institute*, pp. 350-1: the one pertaining to the baths at *Aque Solis*, fully described at p. 14 of Scarth's *Roman Bath*; and that figured in plate 26 of Artis's *Durobrivæ*.

so that the line of junction of the tiles, forming the base of the supported pavement, should be over the centre of each. At Wroxeter¹ they were upwards of 3 ft. in height, and appear to have had no bonding material. At Chedworth, in Gloucestershire, the alternate pillars had been formed of round and square tiles.

But the Romans did not confine their construction to these, but employed materials of any kind that could be made available, not scrupling to use such as had served a far different purpose in previous buildings, and even cutting down "the handsome columns of halls and temples into pillars for sooty hypocausts."

In a villa near Bath,² and in one at Colerne in Wiltshire,³ they were built up of thin slabs of stone. Short pillars of roughly squared stone, had been employed at the Caerwent Baths,⁴ and at a villa in Shropshire.⁵ Pillars of the native rock had served the purpose at Combe Down, near Bath;⁶ whilst at Ickleton, it was effected by "rows of the native chalk soil being left standing;"⁷ and at Chesterford, by "irregular masses or walls of hard chalk."⁸ In one of the hypocausts at Cirencester, they were constructed of rough stone and tiles, mixed together indiscriminately;⁹ and in another at the same place, they consisted "of hollow flue tiles, placed on end, in some of which was put a mass of mortar, apparently to keep them steady by increasing their weight."¹⁰ Some of the latter kind were found at the villa at Hartlip in Kent,¹¹ and in two instances in London and Essex.¹² At York,¹³ Vindolana on the Great Wall,¹⁴ and at Inveresk,¹⁵ stone pillars, shaped like inverted balusters, had been employed. And many

1 And apparently at *Durobrivæ*, as shown in plate 5 of Artis's work.

2 Scarth's *Roman Bath*, p. 121.

3 *Journal of Archaeological Institute*, vol. 13, p. 330.

4 Lee's *Isca Silurum*, p. 102.

5 *Journal of British Archaeological Association*, vol. 13, p. 176.

6 *Ibid.* vol. 19, p. 62.

7 *Ibid.* vol. 4, p. 360.

8 *Ibid.* vol. 4, p. 370.

9 *Antient Corinthum*, p. 64.

10 *Ibid.* p. 65.

11 *Collectanea Antiqua*, vol. 2, p. 6.

12 C. R. Smith in *Journal of British Archaeological Association*, vol. 4, p. 45, *et seq.*

13 Wellbeloved's *Eburacum*, p. 72, and plate 8.

14 Bruce's *Roman Wall*, 1st edit., p. 238.

15 Stuart's *Caledonia Romana*, plate 4.

examples of portions of the shafts and bases of columns and pilasters, (some of large size), have been found utilised in a similar manner.*

A singular variety of hypocaust construction was uncovered at Woodchester, beneath one of the rooms, which, from the number of flue tubes in the walls, had apparently been intended for a *Calidarium*. Projecting from two of the sides, but separated along the centre by an open space, the length of the room, were a series of cross walls, narrow below and broad above, and perforated by two or three rows of semi-circular tiles (*imbrices*), some of which were arranged in pairs so as to form circular channels; the whole being closed in above by oblong tiles;† so that the heat currents could pass unimpeded in every direction.

In some instances ordinary flues were constructed, instead of the more complicated built-up *pilæ*; such was the case in several of the Woodchester apartments; for example, the large pavement had "several flues running under it which crossed each other at right angles; they were large enough to admit a person to creep through a great part of them."‡ A plan somewhat similar was met with at Rodmarton in Gloucestershire; excepting that the channels branched off irregularly, and were of various dimensions, some being "eleven inches wide, others seven inches and a half." In this instance, although the flues communicated with an opening through the outside wall, answering to the *præfurnium*, yet they were apparently not "intended for any other purpose than that of keeping the several rooms dry."§

The floor of the hypocaust, on which the *pilæ* rested, sometimes consisted of the natural rock or soil (the latter well beaten into a hard surface), but more generally of a bed of tiles or concrete; whilst the vault or roof was almost invariably formed of tiles, occasionally of one row, but more frequently of two (sometimes of three or more); those of the lower row being smaller than those of the upper, which latter joined closely, so as to form the foundation of the proper pavement.

The fire was made at the place called the *præfurnium*, which was an opening into the hypocaust, through an external wall of the building; sometimes of square form, as at Caerwent, and Jublains in France; frequently semicircular, either as a pseudo-arch, formed of

* *Antient Corinthum*, p. 22; Bruce's *Roman Wall*, 2nd edit., p. 206; *Archæologia*, vol. 9, p. 327; and *Journal of British Archaeological Association*, vol. 16, pp. 211-12.

† *Account of a Roman Building at Woodchester*, by S. Lysons, plates 25-27.

‡ *Ibid*, p. 5.

§ *Archæologia*, vol. 18, p. 45.

overlapping tiles, as at Caerleon, or constructed of materials in the true arch form, of stone as at Cirencester, or of tiles as at Wroxeter.* Its communication with the body of the hypocaust, often consisted of a long narrow vent, as in instances at Wroxeter, Caerwent, and Withington in Gloucestershire.† The approach to it was usually on the outside of the building, forming a kind of stoke hole, and bore a close similarity to the firing places of modern hothouses. The fire appears to have been generally made at the mouth of the *præfurnium* (the focus or hearth), and on a level with the floor of the hypocaust. The cheeks or sides of the furnace, as well as the *pilæ* in their immediate vicinity, are often found slagged and burnt; together with a copious deposit of soot on all the adjacent parts.‡

It is evident from the large quantities of wood ashes, found at the mouths of furnaces, that wood (which was at that period abundant in quantity and readily obtained), was the fuel generally employed; but that Coal was known to the Romans, and, in the districts where it was plentiful, was used by them, is indisputable. At Wroxeter,§ coal in its mineral, as well as in its burnt condition, was found lying adjacent to, and within some of the hypocausts; whilst, not only have the ashes been found in nearly all the Stations of the Great Wall of Hadrian,

* The general construction of the opening into one of the hypocausts at Woodchester, is thus described in the work of Lysons:—"The aperture under the wall, where the fire seems to have been placed, was formed by bricks 1 ft. 5 in. long, 1 ft. wide, and 2 in. thick; it is 1 ft. 11 in. wide at the bottom, and 6 in. at the top, where a sort of arch is formed by the edges of the bricks gradually advancing beyond each other. This fire-place has walls 1 ft. 8 in. thick on each side of it, 4 ft. 2 in. asunder, and projecting 4 ft. from the wall of the room. It is probable that this was formerly arched." The plan and elevation are figured in the accompanying plate. *Sp. P. 70.*

† *Vide* plate 6 in *Archæologia*, vol. 18.

‡ At a villa discovered in Wiltshire, "the furnace chamber was constructed of large stones, which, from the action of the fire, had very much the aspect of very large blue pebbles: the communication between this and the hypocaust had its sides constructed with bricks an inch thick, whilst the top and bottom of the aperture were of hard stone." (*Journal of Archaeological Institute*, vol. 13, p. 330.) The Jublains example, above mentioned, is represented in the accompanying plate, and in the description of it (*Collectanea Antiqua*, vol. 3, p. 115) Mr. C. R. Smith suggests, that some of the culinary operations were conducted there. At Rodmarton, in Gloucestershire, Mr. S. Lysons "conjectured that the *præfurnium* of the hypocaust served for the purposes of cookery," from having found in it "fragments of a colander, and several other coarse earthen vessels, and an instrument of iron, which seemed to have been intended for culinary purposes." *Archæologia*, vol. 18, pp. 115-6.

§ Wright's *Guide to Wroxeter*, 2nd edit., pp. 38 and 55.

but, according to Bruce,* "in some, a store of unconsumed coal has been met with, which, though intended to give warmth to the primeval occupants of the isthmus, has been burnt in the grates of the modern English."†

* *Roman Wall*, 2nd edit., pp. 432-3.

† Some writers have denied that the Romans employed, or knew the properties of coal, whilst, at the same time, they have alleged that "the primeval Britons appear to have used it." (Art. *Coalery* in Burrowes' *Modern Encyclopædia*.) Pennant's assertion, "since wood was the fuel of their own country, and Britain was over-run with forests, it is not likely they would pierce into the bowels of the earth for a less grateful kind;" (*Tour in Scotland*, edit. 1790, vol. 3, p. 312); serves only to show that the Romans employed wood, because it was obtained with greater ease. It would seem inexplicable, supposing it were correct, that coal should have been used by the former, whilst the latter were totally unacquainted with it. But a close investigation of the subject, more especially of the archaeological explorations of late years, proves satisfactorily, that this great people *did* understand the peculiar properties of this mineral fuel, and moreover employed it in those localities where it approached the surface. The following facts will serve to corroborate the statement made in the text:—At one of the meetings of the British Archaeological Association (*Journal*, vol. 16, p. 324.) Mr. Wright "exhibited some specimens of mineral coal recently obtained from one of the hypocausts excavated at Wroxeter, thus placing the employment of this material for heating the flues of the Romans beyond further question." And Mr. Hull ("On the Coal resources of Great Britain" in the *Quarterly Journal of Science*, vol. 1, p. 31) affirms, that the coal used by the Romans at Wroxeter, was obtained from what is now known as, the Colebrookdale Coal Field; and, owing to the circumstance, that "the coal has been worked here more than a thousand years," in "twenty years hence," it "will in all probability be exhausted." Again, along the line of the Great Wall, "in several places, the source whence the mineral was procured, can be pointed out." (Bruce's *Roman Wall*, 2nd edit., p. 433.) Even Horsley (*Britannia Romana*, p. 209) mentions "a coalery not far from *Benwel* (Northumberland), a part of which is judged by those who are best skilled in such affairs, to have been wrought by the Romans." At one of the meetings of the Archaeological Institute (*Journal*, vol. 5, p. 69), Mr. Pratt exhibited a bronze celt, "found as he stated, in ancient workings for coal, supposed to have been known to the Romans in Andalusia." In Rees' *Encyclopædia*, art. *Coal*, (quoted from Whitaker's *History of Manchester*), it is stated, that "in the West Riding of Yorkshire are many beds of cinders, heaped up in the fields, in one of which a number of Roman coins were found some years ago." We learn from Wallis (*History of Northumberland*, vol. 1, p. 119) that "in digging up some of the foundations of their (the Roman) walled city *Magna* or *Caervorran*, 1762, coal cinders, some very large, were turned up." Again, during the excavations on the site of a villa at Great Witcombe, Gloucestershire, "several large pieces of pit coal, with coal ashes, were found." (*Archæologia*, vol. 19, p. 183.) Whilst at Woodchester, "a considerable quantity of coal ashes was discovered" between some walls which had apparently supported a boiler. (*Account of Roman*

Many houses, even of small size, appear to have had two *præfurnia* or fire-places, instead of one.* From thence the smoke and heated vapors passed into the adjacent hypocaust, and then (after having usually traversed a number of others adjoining), by means of openings in the divisional walls,† ascended a series of small chimney-like tubes, constructed of flue tiles; which, being arranged vertically, terminated at their upper part by opening into the air, but by what precise method is, however, at present unknown. These flues frequently contain evidences of the action of fire, in the large quantity of soot deposited in them: at *Borcovicus*,‡ they were found full of it; and at *Cilurnum* “the soot in the flues was found as fresh as if it had been produced by fires lighted the day before”§ The draught of these flues must have been sometimes very powerful, as at *Caerwent*,|| pieces of charred stick were found in them, apparently carried there by the heat current.

In some of the ordinary living apartments there were two or three of these tubes sunk singly into the wall, as at *Bramdean*,¶ or projecting

* *Vide* the plan of the Hartlip villa in *Collectanea Antiqua*, vol. 2, p. 6; and that of a small house at Lymne (*Portus Lemanis*), in *The Celt, Roman, and Saxon*, 2nd edit., p. 162.

† This is well shewn in the plate of the *Caerwent Baths*. At *Caerleon*, flue tiles were found fixed horizontally in the thickness of the wall, apparently for a similar purpose (*Isca Silurum*, p. 91.) At the Hartlip villa, a hollow tile passed “through the wall to create a draught of air from the furnace.” (*Collectanea Antiqua*, vol. 2, p. 7.)

‡ Bruce’s *Roman Wall*, 1st edit., p. 223.

§ *Ibid*, p. 179; also an example at *Isurium*, mentioned in Wright’s *Wanderings of an Antiquary*, p. 237.

|| *Isca Silurum*, p. 102.

¶ *Collectanea Antiqua*, vol. 2, p. 157.

Buildings at Woodchester, by S. Lysons, p. 12.) Although it is asserted that the Romans had no name for coal (their *carbo* denoting charcoal), yet the following extract from the work of Solinus, who flourished circ. A.D. 80—(quoted in Searth’s *Roman Bath*), which is believed to allude to *Aquæ Solis* (Bath), describes in a remarkable manner, the difference he noticed in the action of fire on wood and on mineral fuel: after an allusion to the “fontes calidi,” over which *Minerva* was the presiding deity, the passage runs thus, “In cuius *Æde* perpetui ignes nunquam canescunt in favillas. sed ubi ignis tabuit, vertit in globos saxeos.” (“The fire never become grey or white in the ashes,”—which would result from the combustion of wood,—“but when the fire wastes, it turns into stony masses,”—or cinders of mineral coal.)

from its surface as pilasters, as at Isurium.* But we not unfrequently find that one or more of the walls of an apartment are completely covered with them, arranged vertically, evidently for the purpose of making that particular room intensely hot; and, moreover, by means of their lateral square or circular openings, establishing a free inter-communication, so that the heat would be better equalised.

Now whenever apartments of the Roman era are met with, containing this mass of heating surface, antiquaries are pretty well agreed, that they constituted the *Calidaria* or *Sudatoria* of Baths. A well marked instance was discovered at Wroxeter, where there yet exists a wall covered with concrete, bearing the impressions of the wavy lines on the posterior surfaces of the flue tiles, the latter having parted company from their bedding centuries ago.† It is rather remarkable that flue tiles were not employed to heat the *Calidaria* at Pompeii, but still the principle adopted was the same, the walls being made double so as to leave a vacuity between them, which communicated with the furnace; by this means a column of heated air enclosed the apartment on all sides.‡

The method of fixing these tiles was very simple and effective:—Mortar was thickly plastered over the wall to form a bed for the tiles, which were then so arranged as to form continuous vertical tubes: all the joints being then well cemented, they were firmly secured to the wall by means of T shaped holdfasts, some of which were found *in situ* at Caerwent and Wroxeter; after this, they were covered with another layer of mortar, which, after receiving a coating of fine stucco, was painted in fresco.§

* Wright's *Wanderings of an Antiquary*, p. 237. At Bremenium, some buttress-like projections on the *outside* of a Roman building, were probably “not intended to strengthen the walls, but were connected with the heating of the apartments, for a flue goes under the floor from the centre of each bay.” (*Collectanea Antiqua*, vol. 3, p. 174, and *plan* facing the same page.)

† *Vide* plate 17 in vol. 15 of the *Journal of British Archaeological Association*. An engraving, giving an admirable idea of this flue construction, appears in the *Collectanea Antiqua*, vol. 3, plate 26; and also in the plan of the Public *Thermæ* in Scarth's *Roman Bath*.

‡ Gell's *Pompeii*, vol. 1. p. 114.

§ Some specimens of these iron holdfasts may be seen in the Museum at Shrewsbury. They appear, from the following extract from Wright's *Wanderings of an Antiquary*, p. 127, to have been occasionally used for other purposes in the economy of a Roman house:—“In the interior face of the extreme western wall of this house (at Lymne), is a row of T shaped iron cramps driven in up to the head, which appear to have been fastenings of some framework or tapestry that covered the wall.”

The warm bath frequently had a hypocaust beneath it; and around its sides, flues are sometimes found. This plan would not be sufficient to heat the water, but would act as an important adjunct in assisting to maintain its temperature.*

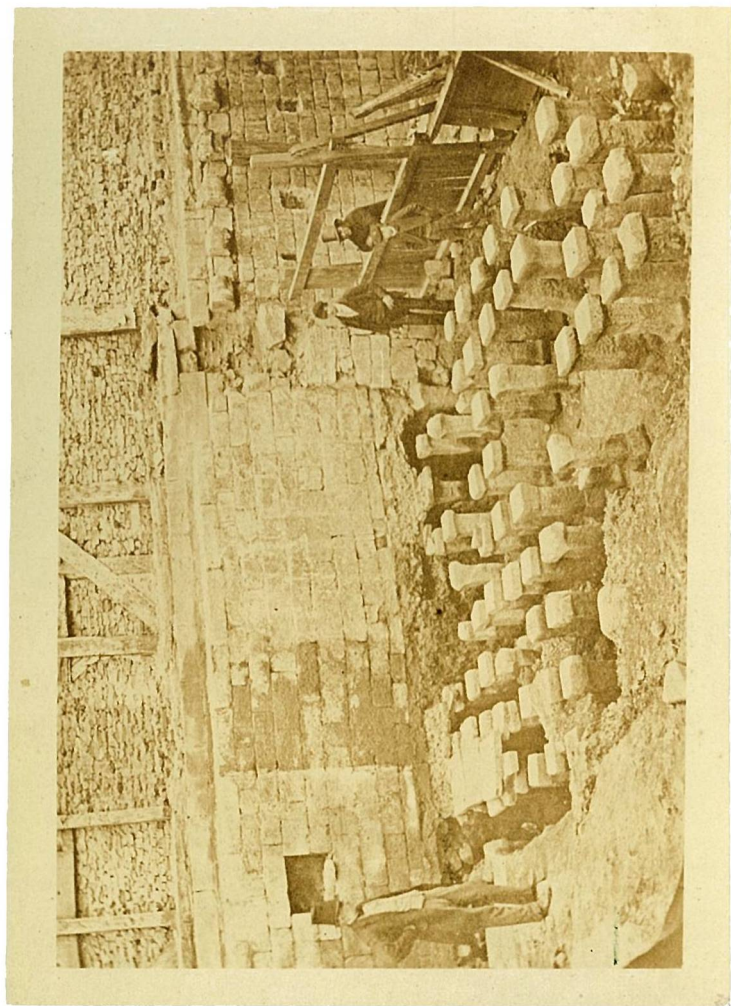
It must not be supposed that, whenever a hypocaust is discovered, the remains of flue tiles in position will of necessity be found. This arises, partly from the circumstance, that the remains of Roman buildings are rarely discovered above the floor level, and partly from the fact, that flues were not present in all rooms.

The system of warming apartments by hypocausts and flues, must have possessed many advantages. It must have created a genial temperature all through the winter apartments; and although the great thickness of the pavement (averaging one foot), would require a prolonged heat, before it could be thoroughly warmed, yet when it was once brought to this state, it would retain it for a considerable time, and certainly would not scorch the air, and produce that unpleasant odor, so common where ordinary stoves are employed. Moreover, the presence of one or two flues, would soon warm the apartment, without taking into consideration the warmth derived from the pavement itself. A little inattention to the furnace would make no material difference to the temperature of the house, and a fire might be left all night with thorough safety. Further than this, by the heated air passing through so many channels, the heat would be pretty well exhausted, before the external termination of the flues was reached.†

The portions of the rooms of the Roman building or buildings, disinterred in Bridge-street, Chester, show the remains of an extensive series of hypocausts, not excelled in interest by any hitherto discovered in Britain. The sites of all the rooms had been excavated out of the

* The existence of a hypocaust under a bath is well shown in an example discovered at Carisbrooke, engraved in *Collectanea Antiqua*, vol. 6, p. 125. (*vide also Journal of British Archaeological Association*, vol. 16, p. 315.) Combined with the system of flues, instances have been found at Caerwent (*Isca Silurum*, p. 100. and plate 41), at Wroxeter in 1788 (*Archaeologia*, vol. 9, pp. 327-8), and at Wheatley, near Oxford (*Journal of Archaeological Institute*, vol. 2, pp. 352-3.) At the latter place two small baths had been erected near each other, and the describer terms one of them a boiler or cistern, although it scarcely possesses the necessary attributes of such. Single flues are shewn in the walls of a bath uncovered at Isurium, as represented in plate 14 of H. E. Smith's *Reliquiæ Isurianæ*.

† *Vide* remarks in Bruce's *Roman Wall*, 1st edit., pp. 180-1.



ROMAN REMAINS FOUND IN BRIDGE ST. CHESTER.
The Hypocaust Pillars

solid rock, and upon the bared surface, a thick layer of ordinary concrete, containing large pieces of pounded tile, had been spread, thereby forming a floor upon which the pillars stood, so that any rising of damp was effectually prevented.

Commencing with the one first uncovered, and which was the most complete of the series, the pilæ, or supporting pillars of the pavement, were of a most unusual type, and consisted of square columns formed of single blocks of sandstone, averaging 2 ft. 9 in. in height, roughly worked to shape with the pick; so roughly, in fact, that, excepting in height, no two of the pillars were alike in their measurements.* Their upper and lower parts were expanded, and varied from 10¼ in. to 12¼ in. square, that of the shafts being from 7 in. to 10 in. Some were taper, the large end being uppermost, whilst others were considerably curved, or even, as it were, twisted. The average distance from one base to another was about 10 in.; they were so arranged in parallel rows, as to be at right angles to, and equi-distant from, each other; and all appeared to occupy their original positions.† Upon these pillars were found large flat red tiles (*lateres*), measuring 18 in. square and 3 in. thick, loosely placed, without any intervening mortar or clay. These again were surmounted by larger tiles, averaging 2 ft. square, so laid, that each tile rested vertically over portions of four pillars: being in close contact with the adjacent tiles, they formed a complete floor, and constituted the basis of the pavement of the apartment. These two layers, which had no bonding material between them, formed a kind of pseudo-arch, and most probably rested where they joined the wall, in proper set-offs, as at Wroxeter. In several places thin slabs of grey sandstone had been substituted for tiles, and nearly all of the latter were in a fractured condition at the time of their discovery.

The tiles of the upper row, differed from those of the lower, in containing a number of ½ in. perforations, and varying from 6 to 13 in number in each tile. In attempting an explanation of the use of these holes, a writer in one of the local papers (apparently copied from Hemingway's *Chester*, vol. 2, p. 353), stated that "steam was admitted into the chamber above," through them. Now if this were

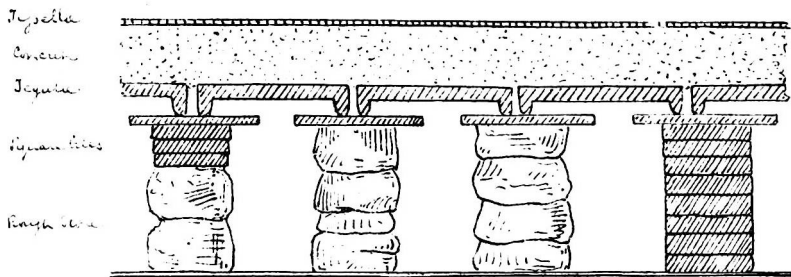
* One of somewhat similar shape is engraved in plate 8 of Wellbeloved's *Eburacum*.

† At Wroxeter, a wider interval existed between the pillars along the centre of one of the large hypocausts, which was thought by Mr. Wright to be for the purpose of cleansing and removing the soot; nothing of the kind has been observed in the Chester examples.

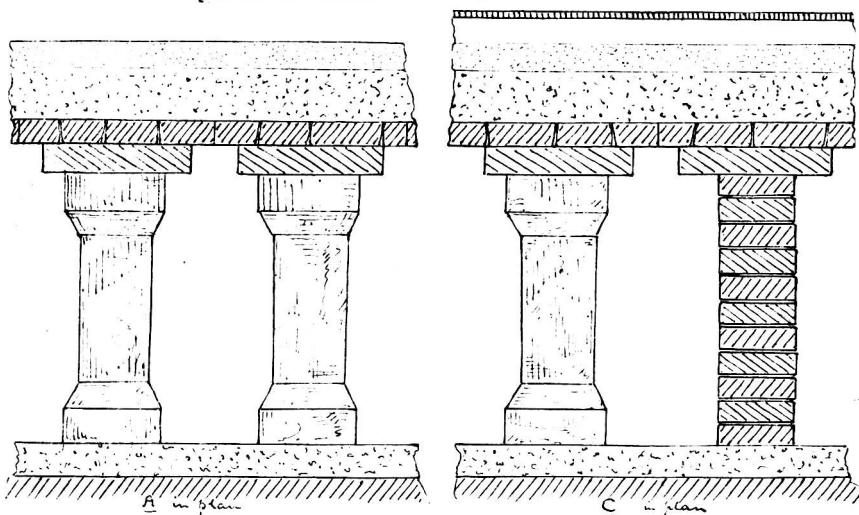
correct we should naturally expect to find this plan, or one attended with similar results, adopted in hypocausts in other parts of the country ; such however is not the case, but on the contrary, pains were evidently taken to make the floor, constructed of these tiles, a complete barrier of separation between the pavement proper and the hypocaust * The method of firing employed, would generate vapors of a hot and dry character, and any moisture would seriously impede the draught. If even steam were generated, its ascension into the apartment above, through the small holes in these tiles, would be a matter of simple impossibility ; for,—in addition to the fact that the greater number of these perforations were obstructed by the first series of tiles, capping the pilæ,—the moist vapor would have to find its way through a solid concrete pavement, one foot in thickness. Moreover this explanation would have the effect of converting all the hypocausts hitherto discovered in Chester, into *sudatoria*. These perforations were most probably found useful in some stage of the manufacture of the tiles, more especially to ensure their proper flatness—a point of essential importance. It has to be borne in mind, that a comparatively thin mass of clay, 2½ in. square, must have been liable to warp in the process of drying ; and it is fair to presume that the manufacturer ascertained by experience, that the presence of a number of perforations, would not diminish the strength of the tiles ; but, by forming so many independent centres, would facilitate and equalize the process of drying, and in this way prevent twisting and warping. Had they been intended to facilitate the transmission of heat or vapors, the removal of a portion by a circular punch, would have left a clear channel for this purpose ; but a careful examination of them, shows that they were rudely made by some pointed implement, producing a simple displacement of the soft clay, leaving a smooth full-sized hole on the lower surface of the tile, and one much smaller, and having a raised irregular lip, on the upper surface. In confirmation of this view, it may be mentioned that some kind of modern bricks are perforated on this principle.†

* Even perforated tiles are very rarely found. One discovered amongst other Roman remains at Wroxeter in 1788. was deemed of sufficient importance to require a special description, and as will be perceived by the following extract from Mr. Leighton's paper (*Archæologia*, vol 9, p. 326). bore a close resemblance to the Chester examples:—"A tile two feet square, pierced with many holes, which holes were wide at the lower side, and ended almost in a point at the upper side."

† Some were exhibited at the meeting.



CONSTRUCTION OF HYPOCAUST AT CIRENCESTER (CORINUM)
 (vide p. 20 and 64)



CONSTRUCTION OF TWO HYPOCAUSTS AND FLOORS
 OF THE 1ST AND 3RD APARTMENTS IN BRIDGE ST. CHESTER (vide p. 69)



PRÆFURNIUM AT WOODCHESTER (vide p. 66)

All the pilæ, as well as the tiles, were carefully examined to ascertain, whether there were any traces of the action of fire; but, with the exception of some doubtful appearances at the south-western angle, there were no marks of any, no slags, and an entire absence of soot. Large quantities of cinders and coals were found in the rubbish of the hypocaust, but they were evidently of a comparatively modern origin; derived principally from large ash pits, which occupied the east end of the room, and from which the pillars had been removed.

Neither in this, or in any of the other rooms, were flue tiles found in position, nor were there any signs as to where any had been fixed, but that they had been employed, is proved by the fragments of them found amongst the debris. Nor were there any openings in the divisional walls between the hypocausts; nevertheless communications may have existed along the south boundary, or in those portions of the lateral walls which were unable to be examined.

As we are unaware of the size of the original room, we can form a proximate notion only as to the number of pillars which must have existed on the site, and the same may be said of all the other apartments. The width was 23 ft., and must have required 12 rows of pillars, of which the remains of ten consecutive ones were found. We are unacquainted with its proper length, but as far as the mediæval wall, which formed its modern boundary, there were the remains of twelve rows of pillars, and beneath and beyond the wall, the remains of two others were found, so that we have full evidence of the original existence of 168 of these pillars, and there were probably more, as no traces of a Roman cross wall were discoverable. The number stated, will afford us a faint idea, of the enormous amount of labour, expended in the construction of these hypocausts.

In the second room, containing the first tessellated pavement which was discovered, there were found several whole and many fragments of pillars, similar to those just described.* This was also the case on the site of the 4th room. But in the 3rd, although some pillars of the same character were found, yet they were intermingled with some constructed of tiles (the ordinary *lateres*, measuring $7\frac{1}{2}$ in. square and $2\frac{1}{2}$ in. thick), bedded together with clay. Neither on these, nor on any of the large covering tiles, were there any legionary or other marks.

* The square opening into this hypocaust, which existed in the main wall, may perhaps have served a similar purpose to the one at Rodmarton, noticed in p. 60.

No remains of hypocaust pillars were found in the 5th room, although there is but little doubt that they existed there originally, as the floor was on the same level with that of the other rooms.

These hypocausts, it should here be stated, are by no means the first which have been discovered within the Roman boundaries of Chester. Two, for example, were found in Watergate-street in 1779; the smaller of which contained "ten pillars on two sides, and a vacant space in the middle. Adjoined to it was a small apartment, with the walls plastered."* One was described by Stukeley as existing in Northgate-street in 1776.† Another, the so called "Roman Bath," is the one happily yet preserved in Bridge-street, and which was discovered more than a century since. Its front wall is about 51 ft. from the line of the present street, and in advance of the more recent discoveries. The dimensions of its interior, as it now exists, are 15 ft. long, by 8 ft. broad (these are the rough measurements,—the walls being somewhat irregular, render it difficult to give the exact length and breadth.) The pillars are of sandstone, and are similar in form to those of the adjoining hypocausts; their original number was 32, in four rows of eight in each, and thus tallies with Pennant's description.‡ Lyons§ gives a plan of it, which is erroneous, as showing seven only in a row instead of eight. At present there remain 28 pillars, of the same character as those recently discovered, but the dimensions are somewhat less, averaging 2 ft. 8 in. only in height. The floor is of concrete. On the south side, according to Pennant, "between the middle pillars is the vent for the smoke, about 6 in. square, which is at present open to the height of 16 in."|| There is a rough

* These remains (according to Hemingway's *History of Chester*, vol. 2, p. 353; and Ormerod's *Cheshire*, vol. 1, p. 295) were removed to Oulton Park. One of the pilæ is, however, preserved in the garden of the house adjoining the Chester Railway Station, formerly occupied by Mr. John Broster. It is of red sandstone, and agrees in general measurements and character with the Bridge-street examples. Let into the upper surface is a brass plate, containing the following inscription:—"A fragment of the Roman hypocaust discovered in Watergate-street, Chester, and which was erected *circa* fifty years before Christ." It need scarcely be remarked that this assigned date is too early by at the very least a century and a half.

† "At the great house over against the shambles is a hypocaust of the Romans, made of bricks all marked with the twentieth legion. It is the floor of a cellar." *Itinerarium Curiosum*, cent. 2, p. 34.

‡ *Tour in Wales*, vol. 1, p. 111.

§ *Magna Britannia*,—*Cheshire*, p. 431.

|| *Tour in Wales*, vol. 1, p. 112.

opening still remaining, but whatever may have been its condition when Pennant examined it, its present appearance does not exhibit any of the characteristics of a flue.*

It has been stated, that although it originally contained 32 pillars, there are now only 28. Of the four now missing, the engraving in Lysons' work shows two, so that the other two have probably been removed, since the date of publication of that work in 1810. One must have been removed at the time when the excavation was made in the body of the hypocaust, for the evident purpose of exhibiting the general structure more easily to visitors, otherwise the tiles for a considerable space would have been unsupported.

Opening into the hypocaust, is a doorway 2 ft. wide, reaching from the bottom of the excavation just described, to the level of the floor supported by the pillars: having its sides grooved, it was supposed by Hemingway to have been for an iron door. Of the Roman origin of the pillars, and the floor they supported, we have no doubt; but on making a searching examination of the interior, we have ample evidence that all the walls are not of the same date. The east and south sides are of undoubted Roman work; the stones being set in even courses, bedded in concrete, and bonded together at the angle of junction: and moreover, *the east side is continuous with the west boundary wall of the more recently discovered hypocaust*, the characteristics of the two being similar. The north and west sides, however, are certainly not of Roman

* Much has been written about this very hypocaust, and yet scarcely two writers agree in the description, measurements, or other points connected with it. The defect in the plan in Lysons' work has been already mentioned. Dr. Wollaston, in his work *Thermæ Romano Britannicæ* (p. 11), describes the pillars as being 2 ft. 10½ in. high, which he has apparently copied from Pennant (*Tour in Wales*, vol. 1. pp 111-2.) In a popular work on "*The Turkish Bath*," by the eminent surgeon Erasmus Wilson, 3 ft. is stated to be the height, agreeing in this respect with Hemingway's measurements (vol. 2, p. 352). and the description given by this latter author is inaccurate in several other respects. In Wilson's work (in the explanation of the plate of the hypocaust at p. 23), occurs this passage, "The floor on which the burning embers lay is uneven; while the roof, which is the under part of the floor of the bath, exhibits evidences of the corroding action of the fire." Now the floor was originally even, but has been worn and chipped by the numerous visitors. The roof shows no marks of the corroding action of fire, but mischievous hands have removed portions of it, and in common with the pillars, it is so begrimed with smoke and grease, from the large amount of gas, oil, and candles, which have been expended in illuminating it, that its irregular and dirty appearance is not to be wondered at; moreover, whatever evidences of the action of fire it may have originally possessed, have long since been obliterated.

work, the courses being irregular, and not bonding with those of the east and south sides; the mortar is soft and friable, and the internal face, more especially of the west side, is so irregular as scarcely to consist of courses at all, whilst the external consists of much larger stones.*

On the west side of the hypocaust, and connected with it by means of the doorway already mentioned, is a large antechamber, excavated out of the solid rock, the floor of which is rather more than three feet below that of the hypocaust, and therefore considerably lower than any other of the Roman remains more recently discovered in the same locality. This has been called the *præfurnium*, but in its present condition possesses none of the attributes of one. In the floor at its north-eastern angle is a square pit, measuring 9 ft. 7½ in. long by 3 ft. 6½ in. broad, and 4 ft. deep, and usually half filled with water, which drains from its rocky sides. This has been termed a Roman cold or plunge bath,† a title to which it has scarcely a right, since it exhibits none of the characteristics of a bath; it has no seat, or drain, and is situated close to that wall of the hypocaust which has been pointed out as a comparatively modern one, which in itself is almost sufficient to prove its non-Roman character; moreover, its position is so considerably below the level of the pavement supported by the *pilæ*, and its construction so rude in its character, as to be totally unlike all cold or plunge baths of the Roman period hitherto discovered in Britain.

From these remarks it appears probable, that the hypocaust belonged to the range of Roman buildings, found on the site of the Feathers' Hotel; that it was originally of much larger size, and occupied the whole or part of the area of the present antechamber; that the construction and deepening of the latter took place at a tolerably late period, coincident perhaps with the erection of the wall between it and the hypocaust (and probably also of the long wall on the north side of

* An admirable etching by Mr. W. Ayrton, showing the west wall and opening into the hypocaust, &c., appears in vol. 1 of our Society's *Journal*, and in the remarks accompanying it, is the following paragraph:—"It was hard to say of what age the stone wall and door-place might be, through which the pillars and hot air flues are seen."

† "A sort of tank, 7 ft. (!) deep, 10 ft. long, and 4 ft. wide, situate near the mouth of the furnace, which may have served either as a receptacle for warm water, or as a place for a plunge in cold water, after the previous processes of the bath had been completed." (*The Eastern, or Turkish Bath*, by Erasmus Wilson, p. 32.)

the latter); and that the tank was sunk for the purpose of draining the latter, being covered over with a wooden floor, holes for the supporting joists of which still remain.

DRAINS.—We have already noticed the evident care bestowed by the Romans in preventing their houses from being affected by damp; it can therefore be no matter of surprise that their plan of drainage was efficient, and received a large share of their attention.

From the baths and other places inside the dwelling, the waste water escaped by means of leaden pipes into the outside drains.¹ In the construction of the latter, building materials of any kind were employed. In Thames-street, London, one was “formed at the bottom and sides, of two inch boards, 18 in. deep, and 10 in. wide, arched over with Roman tiles placed lengthways, the sides meeting in the centre at top, imbedded in mortar.”² At The Gaer, Brecknockshire, a portion of a drain was discovered “made of semicircular tiles of about an inch thick.”³ At Towcester “tiles, like some forms of modern draining tiles, were found;”⁴ whilst a considerable number of a kind “usually made to fit into each other,” and ranging in length “from 12 in. to 25 in., and 4 in. to 8 in. in diameter,” have been met with in London;⁵ some of which may have been conduit pipes. At Wroxeter⁶ one was formed of flanged tiles (*tegulæ*)—a method not uncommonly adopted, and must have proved very efficient in open drainage. At Caerleon “a large number of drains were discovered amongst the foundations, which varied exceedingly both in size and materials: in some cases they were merely built of coarse stones; in others they were neatly stuccoed; some were floored with the large square roofing tiles, and others with concrete.”⁷ At the same place they were constructed, in two instances, of flue tiles; another example of which was found at a villa in Shropshire.⁸ At Jublains in France, they were of masonry,⁹ and are still nearly perfect. No remains of drains were noticed amongst the Bridge-street ruins; it may however be remarked that many of the

1 *Collectanea Antiqua*, vol. 2, pp. 7-8, and vol. 6, p. 125; Wellbeloved's *Eburacum*, p. 17.

2 *British Archaeological Association Journal*, vol. 4, pp. 38 to 55.

3 *Archæologia*, vol. 1, pp. 296-7.

4 *Ibid.*, vol. 7, p. 113.

5 C. R. Smith's *Roman London*, p. 116.

6 Wright's *Guide to Wroxeter*, 2nd edit., p. 52.

7 *Isca Silurum*, p. 40.

8 *British Archaeological Association Journal*, vol. 13, p. 176.

9 *Collectanea Antiqua*, vol. 3, p. 110, and plate 27.

fragments of tegulæ, which were plentiful amongst the rubbish, were unusually thick and heavy, and may have been originally employed to form surface drains; whilst the lighter tegulæ were confined to the construction of the roof.

That the streets were not wholly destitute of open drains for the waste and rain water, was exemplified at Wroxeter, where, on one side of a street, was laid bare "a gutter, very well made, of carefully squared stones;"* across the same street a number of stones had been placed, similar to those found at Pompeii, and apparently intended to be used as stepping stones, when the streets were flooded, or muddy. A good example of a channel drain was uncovered a few years since in Mill-lane (formerly Pierpoint-lane), on the west side of Bridge-street, Chester, just opposite the site of the Feathers Hotel, and consisted of blocks of red sandstone 1 ft. thick, and 3 ft. wide, having a 6 in. half-round channel. It was laid on a thick bed of concrete, common to it and to some other Roman remains.†

Portions of the main sewers have been discovered in several of the Roman towns in Britain.‡ At Hunnum, "crossing the station diagonally * * a sewer or drain was found of considerable dimensions." Mr. Bruce§ states his "informant crept along it for about one hundred yards." At Lincoln, Mr. Wright informs us "the Roman sewers are still in good preservation, and are constructed of excellent masonry. They are covered with large flags of stone. A small transverse drain brought down the waters from each house." Mr. C. R. Smith walked up one "about a hundred yards."||

Although we have reason to believe that Deva, like all other Roman towns, had a proper system of drainage, but few indications of any have as yet been recorded amongst the archaeological discoveries in Chester. It is possible that much of the waste water may have been discharged from the town by open channels, similar to the one in Mill-lane already described, and the general slope of the ground towards

* *British Archaeological Association Journal*, vol. 16, p. 162.

† An out-door drain stone was found at Caerleon, and is engraved in plate 10 of Lee's *Isca Silurum*.

‡ We have evidence of the extreme importance attached by the Romans to a proper system of sewers, in the great care bestowed by them, at a very early period in the history of their great City, in the erection of that wonderful work, the Cloaca Maxima, and which after a lapse of twenty-three centuries, still continues, through its outlet in the Tiber, to drain Rome.

§ *Roman Wall*, 2nd edit., p. 129.

|| *The Celt, Roman, and Saxon*, 2nd edit., pp. 179-180.

LEVEL OF MILL LANE.

← to Bridge St. 604.3 ~

3/15 ~



4/11 ~



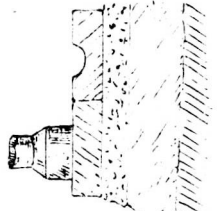
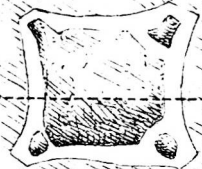
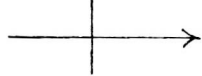
RED SANDSTONE PLACS.

STONE CONCRETE.

CLAY.

7 SANDSTONE ROCK.

SECTION A



CROSS PLAN

SECTION AT A.P.



CHARITABLE

← TO BRIDGE STREET

TO MILL LANE (FORMERLY PIERPOINT LANE.)

ROMAN REMAINS, FOUND IN MILL LANE, WEST SIDE OF BRIDGE ST. CHESTER, IN 1858.

Drawn from plan made by Mr. E. W. L. 1858.

the river would be favourable to their adoption. It is, however, hardly probable that such a plan would have been sufficient for conveying the proper sewage from the houses and streets;* and although but little attention has been hitherto directed to the subject, we are not altogether hopeless of finding some clue to it. Now it is remarkable that we have several accounts of the discovery at different times, along the line of Pepper and Cuppin-streets, and beneath the whole extent of Old Lamb Row, of a continuous line of excavations in the solid rock, varying in depth from 12 ft. to 16 ft. below the present street level, the width above being from 5 ft. to 7 ft., narrowing in their descent, and having at intervals square recesses. The soil and rubbish which occupied them contained numerous Roman antiquities. On what would appear to be very slender grounds, they have been termed subterraneous passages or roads, and one writer suggests they may have formed a portion of an aqueduct. There appears to be an equal, or even a greater probability, that they were some of the main drains of the city. Their depth, narrowness at the bottom, and the soil like character of their contents at the lower part, favour this supposition; and although their direction across Bridge-street, instead of towards the river, appeared to Mr. Ayrton to be an insuperable objection, yet such descents may have been made at other points not yet discovered; and moreover, certain outlets into the river, which may have been connected with these very excavations, were thus described in the last century by Stukeley (*Itinerarium Curiosum*, edit. of 1776, centuria 2, p. 31):—"The ancient subterraneous canals are perfect still; their outlets into the river under the City Walls are visible; and they say that they are so high, that a man may walk upright their whole length."†

* In the brief description of one of the Watergate-street hypocausts, Pennant (*vide* Ormerod's *Cheshire*, vol. 1, p. 295) mentions the existence of "a subterraneous passage, possibly a drain."

† One of the earliest allusions to these excavations appeared in Hemingway's *Chester*, vol. 2, p. 356, to which it was contributed by a correspondent, from whose account we learn that one extended beneath Lamb Row for "upwards of 100 feet, and not terminating at either extremity of the premises." It was uniformly "through its whole extent about 5 ft. wide and 16 ft. deep in the rock," as ascertained by probing with iron rods. In one place by sinking a hole to the bottom he "found it filled in with soil, and at the depth of 8 ft. it appeared to have been boarded across with three inch oak plank, dividing it into an upper and lower road, each 8 ft. high," with at intervals "small square enlargements, as if intended to admit a passing." He concludes his description by remarking, "there can be no doubt but such an excavation must have been intended for some public purpose, the nature of which, by following the direction of it some

We have thus given a full description, in detail, of the Roman structures so recently brought to light, and compared them with the remains of the same era discovered in other parts of the country. We now proceed to enter upon another branch of our enquiry, and to summarise much of this information, by an attempt to ascertain, whether these remains constituted a series of private dwellings, or one or more public buildings, and what may have been their probable character, extent, and date.

BUILDINGS, WHETHER PRIVATE OR PUBLIC.—In the *Celt, Roman, and Saxon* (2nd edit., p. 176), Mr. Wright remarks,—“There are reasons for supposing that in the more important towns, the greatest dwelling-houses were, as at Pompeii, back from the street, and that each was inclosed outwardly with several houses and shops.” The remains of the structures at present under consideration answered to this description, in so far as they were situated “back from the street,” thus favouring the idea of their *private* character: after taking, however, the following points into consideration, we feel compelled to adopt the view that they formed a portion of one or more of the *public* edifices.

1. The situation,—in one of the principal streets of the Roman town. This, in itself may be comparatively valueless, but as connected with other circumstances must not be overlooked.

2. The great extent of the remains. Commencing at the cross-wall opposite the site of the first pillar, the buildings extended in an easterly direction to the full length of the ground excavated, viz., 125 ft.; beyond this, the remains of another tessellated pavement and of the continuation of a paved yard (*vide* K 2, in Ground Plan) proved that the ultimate limits of the buildings had not been reached, and, unfortunately for our object, were unable to be determined.

distance, might possibly be pretty accurately surmised.” Notwithstanding, however, that at a subsequent period it was traced onwards into Pepper-street, no further light has been thrown upon its character. An account of the latter discoveries was contributed by Mr. W. Ayrton to the *Journal of the Lancashire and Cheshire Historic Society*, vol. 1, pp. 79-84 (there is also a brief description by the Rev. W. H. Massie in the *Journal* of our Society, vol. 1, pp. 461-2), in which he points out the absence of “any remains in the form of arches, or covering to this excavation,” which “must have existed,” “had it been a subterraneous passage.” But the oak planking found in the portion under Lamb Row, would have been sufficient to form such a covering, and the employment of wood in the formation of Roman drains, we have already seen exemplified in the construction of the one uncovered in Thames-street, London.

Returning to the front wall used as a starting point, it has already been demonstrated (p. 12) that at least one other apartment existed between it and the present street. Moreover, this wall was continuous with the one forming the posterior boundary of the existing hypocaust (the 'Roman Bath'); and when this is coupled with the fact that the *pilæ* of this latter, as well as the tessellated pavement found above it, were of the same character as those of the later discoveries, we have ample grounds for assuming, that the two formed a portion of the same edifice. Now, on turning to the pages of Hemingway's *Chester* (vol. 2, p. 352), we find it recorded that "when the machine for the weighing of coals (now removed) was erected"—in front of the site of the 'Roman Bath,'—"part of the angle of a Roman building was pulled up at that time, which was undoubtedly one end of the bath; from thence to the hypocaust is 35 ft.;" thus approaching on the South side to within 16 ft. of the present street; whilst, on the North, the existence of the concrete foundation of a wall (X in plan) marks the probability of a similar extension. In addition to this, it has already been stated (pp. 14-15) that along the line of Bridge-street portions of the foundation courses of Roman walls (I, I, in plan) were found; so that we have satisfactory evidence of the original existence of Roman buildings, extending from the most Eastern point of the recent excavations to the frontage of the present street—a distance of about 175 ft. Whether the whole formed a portion of one edifice only, will occupy our attention presently.

Owing to the more limited nature of the excavations in the direction of North and South, we are scarcely able to form a proximate opinion as to the breadth of the original building. As however, at the West end, the distance from the main wall to that of the South boundary of the 'Roman bath' (both walls inclusive), measured about 53 ft., there is no reason for believing that the breadth would be less than this in any other part; and that it was much more is highly probable from the extension of the buildings on the South side, a matter which may be determined by future excavations. These measurements are independent of the space occupied by the pillars.

3. The large size of the rooms. We have seen that the fourth, or South boundary of the first room (as well as of the others) was wanting, and although explorations beneath the modern buildings which intersected it, were rewarded by the discovery of two additional rows of hypocaust *pilæ*—being as far as an examination could be made—no traces appeared of a wall beyond. Connecting this with the fact

that the West wall of this room was continuous with, and formed the division between it and the hypocaust of the 'Roman Bath,' we can scarcely help arriving at the conclusion, that the South wall of the former was, in all probability, in a line with the existing one of the latter: this would cause the inner measurements of this room to be 44 ft. long by 23 ft. wide. The length of the other rooms is not likely to have been less than this.

4. The thickness of the main wall. This has already been described as 4 feet, an unusual thickness for an ordinary wall. Mr. Wright states that at Wroxeter* it was "only in one or two cases of what appeared to be very important walls," that they exceeded three feet †

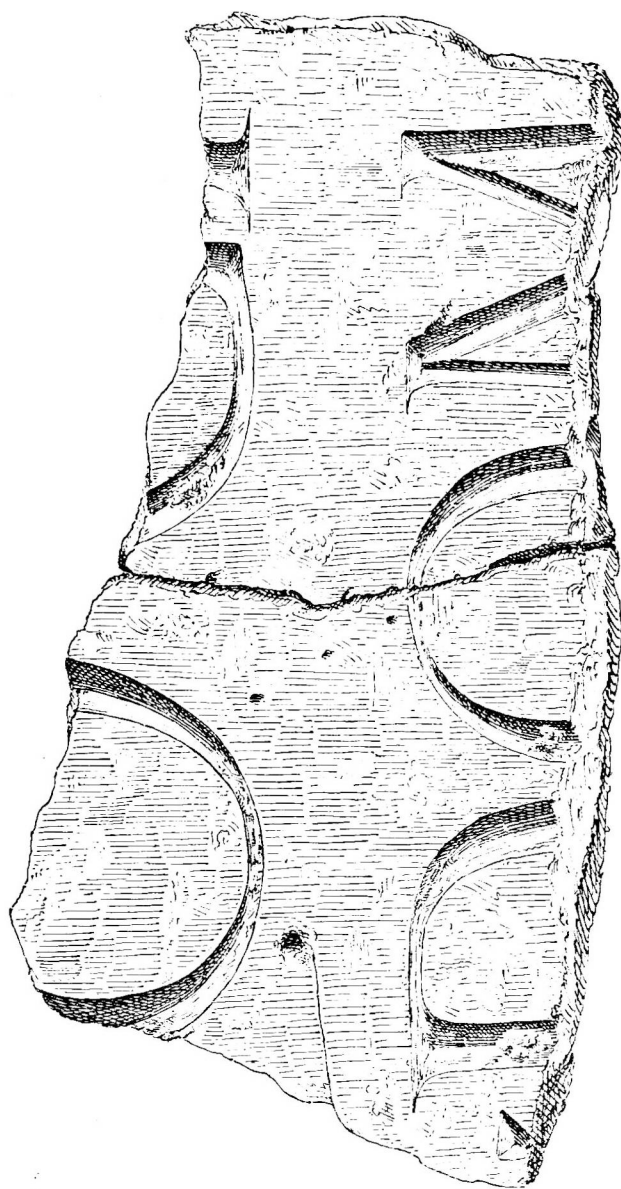
5. The presence of two rows of pillars. That they formed a portion of a public structure is tolerably apparent, but whether connected with the other remains or not will be considered hereafter.

6. The discovery of the remains of an inscribed marble slab. Close to the outer face of the main wall, and opposite the site of the sixth pillar (counting from the West) were found two fragments of a stone bearing the remains of an inscription. ‡ Although the fracture was an original one, yet fortunately the fragments fitted together accurately, and, when united, measured $1\frac{1}{2}$ ft. long, $8\frac{1}{2}$ in. in breadth,

* *Guide to Wroxeter*, 2nd ed., p. 48.

† The walls of ordinary dwelling-houses appear to have been generally from 2 ft. to 3 ft. in thickness; but sometimes they were much less, as in the example of a villa at Withington, in Gloucestershire, where they measured 1 ft. 8 in. (*Archaeologia*, vol. 18, p. 120), and one at Chesterford of 22 in. (*British Archaeological Association Journal*, vol. 4, p. 366). They were 2 ft. at Ickleton (*Ibid.*, p. 360), at a villa in the Isle of Wight (*Ibid.* vol. 16, p. 314), at Woodchester (Lysons' *Woodchester*, p. 7), at Comb End, near Corinium (*Archaeologia*, vol. 13, p. 112), and in two buildings at Isurium (H. E. Smith's *R. liquiae Isuriana* pp. 17, 42). At Hartlip the walls of rooms were "about 2 ft. 3 in. thick" (*Collectanea Antiqua*, vol. 2, p. 4), whilst those of a small villa at Caerwent were 2 ft. 6 in. (*Isca Silurum*, p. 99). The walls of one room at Bignor were 2 ft. 6 in. thick on three sides, and 3 ft. on the fourth (*Archaeologia*, vol. 18, p. 207). The main wall of the Roman building under the City Coal Exchange, London, was 3 ft. (*British Archaeological Association Journal*, vol. 4, p. 38 *et seq.*): this was also the measurement of most of the walls of a villa at Caerleon, but in one instance was $4\frac{1}{2}$ ft. (*Isca Silurum*, p. 92).

‡ Their preservation was wholly due to the exertions of the late Mr. John Peacock, who, being on the spot at the time they were exhumed, at once recognised their character, and prevented their removal by the rubbish cart.



Scale of Inches.

INSCRIBED MARBLE SLAB

FOUND IN BRIDGE ST. CHESTER.
IN 1863.

and 2 in. thick. They are shown on the opposite Plate. A comparatively brief examination of their material is sufficient to prove them to be of Purbeck shell marble.* The posterior surface is rough, and mortar still closely adheres to it: the upper part of the stone is very highly polished, and near its left margin is a rough indentation (evidently produced by some blunt pointed instrument), proceeding from which is a crack. Upon the latter surface are the remains of an incised inscription, but of so fragmentary a character, as to afford us but little clue to the original formula. It consists (*vide* accompanying plate) of portions of two rows, the upper containing the lower parts of the letters O G, and the first limb of an A (?); the lower, of the upper halves of the letters DOM, with a point before the D. The letters are of particularly large size, well cut, and as sharp now as on the day when they were first incised, a proof of the great hardness of the stone. Moreover, they had all been painted red; and traces of pigment still remained in the deep portions of the letters. This inscribed slab was exceeded in interest by none of the other discoveries in Bridge-street; and as there are several points of marked peculiarity to notice about it, this is perhaps the most fitting opportunity to allude to them.

The Material being Purbeck Marble. — At one time it was thought by antiquaries that in England the Romans did not employ marble, and as a writer in the *Archæologia* (vol. 4, p. 105) remarks, “though marble was much used in buildings of the twelfth and thirteenth centuries, it does not appear by history or example, that it was used before that time either by the Saxons, or by the Britons in Roman times;” and conjectures, that what Bede described as “a coffin of white marble,” (discovered in 695 A.D.) and probably of Roman workmanship, was after all only “common white stone.”† But researches within a comparatively recent period, have proved beyond

* The Purbeck, as well as the Petworth marbles, are principally composed of shells of the genus *Paludina*, but in the latter the shells are much larger. Professor Morris, F.G.S., of University College, London, has been good enough to examine the stone, and not only confirms the statement as to its character, but is also of opinion that it was brought from the Isle of Purbeck, “although the Purbeck beds can be occasionally seen in places between that Isle and Aylesbury, or Whitchurch, in Bucks, as at Ridgway, near Weymouth, Tisbury, in Wiltshire, &c.,” from any of which places our Chester specimen may have been obtained.

† *Vide* some remarks in Scarth’s *Roman Bath*, p. 78.

doubt that, in this country, the Romans employed marbles of various kinds, both foreign and native. Of the foreign varieties, the white was by far the most common. Fragments of "white marble fluted slabs" 1½ in. thick, have been found in large quantities, "in several places in the City of London, worked into Roman walls."¹ Similar fragments have been met with at Richborough,² and at Great Witcombe, in Gloucestershire;³ whilst there was discovered at Bath, in 1861, a portion of an inscription incised on white marble.⁴ At Woodchester, Mr. Lysons records the discovery of several varieties of coloured foreign marbles.⁵ A sepulchral slab of "native green marble" was exhumed in London.⁶ These examples show that the Romans frequently employed this material for decorative and other purposes; but on turning our attention to the special variety, known as Purbeck marble, very few specimens have been discovered, which could be safely attributed to the same era. A fragment, containing a "defaced sepulchral inscription," was met with in Cloak Lane, London.⁷ Portions of a slab of this material, bearing incised letters two inches in length, were found amongst some Roman sepulchral remains at Densworth in Sussex, in 1857.⁸ And one of the marbles discovered at Woodchester "much resembled the Purbeck and Petworth" kind.⁹ These are nearly the only instances that have been recorded, and two out of the

1 *Collectanea Antiqua*, vol. 1, p. 139, and plate 48 B,—and *Catalogue of the Museum* of Mr. C. Roach Smith, p. 2. In some remarks on p. 3 of the latter work, Mr. Smith deems it probable that some ancient quarries on the banks of the Loire "furnished most of the material" for the white marble "architectural remains found in England."

2 *Antiquities of Richborough*, &c., p. 48.

3 *Archaeologia*, vol. 19, p. 183.

4 Scarth's *Roman Bath*, p. 77.

5 Thus described in his large work on *Roman Woodchester*, p. 9:—one, "of the coarse grained saligno;"—one, "of the fine statuary, or Parian;"—one, "a brownish red, with dark veins;"—and one "a whitish ground, with light green and dark veins." A "domestic altar, in coloured marble," from the Thames, near London Bridge, is engraved in *Roman London*, p. 48. An inscribed marble funereal tablet was exhibited in the Museum of the Archaeological Institute at Rochester in July, 1863. At Silchester there was dug up, in 1833, "a portion of a sculptured marble capital measuring four feet by three." (*Archaeological Album*, p. 152.)

6 *Roman London*, p. 24.

7 *Ibid*, p. 29,—and engraved in *Collectanea Antiqua*, vol. 1, plate 48A.

8 *Sussex Archaeological Collections*, vol. 10, p. 175.

9 *Roman Woodchester*, p. 9.

three had been employed for funereal purposes. The Bridge-street specimen not only adds another to this list, but appears to be the largest and most interesting one hitherto discovered in this country.

The size and coloring of the letters.—The whole of the incised letters had received an even coating of red paint, which must have presented an agreeable contrast to the polished surface of the marble; this pigment has been chemically tested, and proved to be vermilion (sulphuret of mercury.) The only other example that can be found recorded, of incised letters similarly colored, was that of a portion of a grey sandstone slab, dug up a few years ago in the churchyard of Caerleon, and containing the remains of an inscription, referring “to some building which had gone to decay and had been restored by Severus and Geta, his son.”*

None of the letters in the sepulchral and other inscriptions of the Roman period, found in England, and deposited in the British Museum, bear any traces of color; whilst in some incised slabs in the same collection, brought from the continent, the letters have unquestionably been painted red; but it is doubtful whether the coloring (at least in some of the specimens) has not been performed in comparatively modern times, to make the inscription more legible.† This, however, could scarcely have been the case with the Chester specimen.

The large size of the letters.—The letters of the upper row were 6 in., and of the lower 5 in. long. Now, the largest, probably, that have ever been discovered in England, formed a portion of a sepulchral

* *Isca Silurum*, p. 3, and plate 1. Mr. C. Roach Smith, in *Roman London*, p. 60, remarks that “the pigments used in the paintings of Herculaneum and Pompeii, and those from the walls of villas and houses discovered in France and England, are found by analysis to have been mostly identical;” and according to some analyses recorded by him in the *Journal of the British Archaeological Association*, vol. 4, p. 361, “some of the duller red colors” were “ochres—the brighter, a vermilion.” As shown in their wall frescoes, painted inscriptions, painted columns (as at Pompeii), &c., red appears to have been a favorite color amongst the Romans. In the Caerleon inscription the color used is stated to be *minium* (red lead), but as it does not appear to have been tested, and bearing in mind the facility with which all lead colors blacken in the earth, it is probable that vermilion was the color employed as in our Chester example.

† On the occasion of the inscription being exhibited at one of the evening meetings of the British Archaeological Association (*Journal*, vol. 22, p. 306) “Mr. Josiah Cato observed that in the York Museum a modern hand had colored all the Roman inscriptions red.”

inscription dug up on Tower Hill, London, in 1852;* in which those of the first line (DIS) were 8 in. long, of the second ((M)ANIBVS) 7 in., whilst those of the third line were much smaller. The letters of the Caerleon colored inscription measured 4 in. The occasional larger size of the upper rows of letters in Roman inscriptions, suggests the probability of the Bridge-street specimen having been a portion of the upper part of the original incised monument, and that the succeeding lines contained much smaller characters.†

The object of the Inscription.—The letters evidently constituted a small portion only of the original inscription, and being so few in number, afford us but slight assistance in forming an opinion as to their signification. They, however, contain sufficient material to necessitate a few remarks. The first row is remarkable for containing the letters O G, following each other. Now whether belonging to the same word (which their closeness to each other appears to warrant), or portions of two separate words, their juxtaposition is exceedingly uncommon in Roman inscriptions.‡ The point before the letters of the second row, proves not only that they formed the commencement of a word, but also that they were preceded by another word in the same line.§

* The stone is in the British Museum. It is engraved in the *Journal of the British Archaeological Association*, vol. 8, p. 241, and in C. R. Smith's *Roman London*, plate 3, fig. 2.

† *Vide* Gruter's *Inscriptiones Antiquæ*, p. 239, No. 3,—and an example in *Roman London*, p. 29.

‡ In the *Historical Tour in Monmouthshire*, by W. Coxe,—appendix to part 2, p. 433,—is recorded the fragment of an inscription found at Caerleon, the third line of which commenced with O G, followed by E S. In some observations on this inscription, by the Rev. J. McCaul, at p. 124 of his *Britanno-Roman Inscriptions*, he remarks the probability of these letters having been intended for OC(TOBR)ES, the G being a stone cutter's blunder; an opinion strengthened by another inscription found at the same place, recorded at the same page of Coxe's work, having OCCB in the third line. OC is much more frequent than OG; in an inscription at p. 157 of Stuart's *Caledonia Romana*, PROC stands for pro-consul. In the Bridge-street example the letter is undoubtedly a G.

§ The most common point, or sign of separation of one word from another in Roman inscriptions, is a triangular incision. Another form in common use was that of a pointed leaf, an evident favorite amongst Roman artists, and common in the ornamentation of pottery, particularly of the Samian ware. In some remarks on leaf decoration by Mr. Just, in vol. 3 of the *Journal of the Lanc. and Cheshire Historic Society*, he mentions that a writer upon the Cemeteries of the Martyrs at Rome, "has strangely mistaken these sacred leaves for hearts!" An engraving at p. 189 of Horsley's *Britannia Romana*, exhibits twenty-five different kinds of points.

The letters DOM may have stood for DOMUS, as in five Cumberland examples described in Horsley's work; in two of these it was followed by the word DIVINA.* Or they may have denoted DOMINUS, a term not uncommon in inscriptions.† It is, however, equally probable that they formed the commencement of some Roman name.‡ Now the only historic personages connected with Roman Britain, whose names commenced thus, were Julia Domna (the wife of Severus), and the Emperor Domitian. A stone found at Silchester, in 1741, bears an inscription to the former, which however is remarkable for the absence of the second name.§ I know of no inscribed stone, found in Britain, bearing the name of the latter, and this absence is scarcely to be wondered at, when it is considered that during his reign (A.D. 81-96), the good effects of the rule of Agricola were only beginning to be developed. It is true that several pigs of lead, discovered in Cheshire|| and elsewhere, do contain it, but similar articles have been found, bearing even the name of Claudius, a period when the Roman arms in Britain were on a very unsettled footing.

* The word occurs in full, and in very large characters, on a marble vase found at Rome, and figured in Gruter's work, p. 239. No. 3.

† The first words on the votive altar discovered in Chester in 1693, and engraved at p. 429 of Lysons' *Cheshire*, consist of PRO SAL DOMINORUM. In two of the Cumberland inscriptions mentioned in Horsley's *Britannia Romana*, DDNN stands for DOMINI NOSTRI; and at p. 270 the author remarks that the term "was not used in inscriptions so soon as Caracalla."

‡ DOMS appears on the handle of an amphora, represented in plate 23 of Lee's *Isca Silurum*. Several examples are given in the list of potters' marks on Samian ware at p. 103 of C. R. Smith's *Roman London*. One of much interest to Chester antiquaries was found at Eildon in Roxburghshire a few years ago, and is described at p. 150 of Stuart's *Caledonia Romana*. It occurs on a tablet dedicated by CARRIUS DOMITIANUS, a centurion of the 20th legion, to the god Silvanus, for the welfare of himself and his family ("pro salute sua et suorum.")

§ *Journal of British Archaeological Association*, vol. 16, p. 93, and Akerman's *Archaeological Index*, p. 76.

|| A pig of lead found in Commonhall-street, Chester, is represented in vol. 5, p. 226, of the *Journal of the British Archaeological Association*, and although the inscription is somewhat defaced, Mr. C. R. Smith believes it "was most probably inscribed to Domitian." Camden (*Britannia*, by Holland, p. 611) makes the following remarks upon some found at Halton:—"There were heere upon the very shore gotten out of the ground twenty sowes of lead long in forme, but foure square. On the upper part whereof, in a hollow surface, is to be read this inscription: 'Imp. Domit. Aug. Ger. de. Ceang,' but on the other, 'Imp. Vesp. VII. T. Imp. V. Coss.'"

The general conclusions from these particulars may be briefly summed up, by stating that the stone probably contained a dedicatory inscription on the occasion of the erection or the restoration of some public edifice; the important character of the latter being as it were reflected in the inscribed tablet, as exhibited in the rare and durable material employed, in its highly polished surface, and in the large, well cut, colored letters which it bore.

Having thus assigned reasons for believing the remains to have been those of public buildings, we now pass on to consider their probable uses.

Temple.—Were the columnar remains those of a small temple, or shrine? This is the opinion expressed by Mr. Tite, in the paper to which allusion has already been made.* If this opinion be correct, its importance to antiquaries cannot be overrated, inasmuch as it would be almost the only instance on record of the discovery, in this country, of the entire site of a Roman temple. It behoves us then to be additionally careful in our examination of all the facts, before receiving or rejecting this suggestion.

* *Vide* page 1. This paper has not yet been printed *in extenso*, but the following notices of it appeared in some of the Journals:—

From the *Proceedings of the Society of Antiquaries of London*, 2nd series, vol. 2, p. 325. "Thursday, 14th January, 1868—William Tite, Esq., M.P., V.-P., communicated an account of some Roman remains recently discovered at Chester. In passing through that City, Mr. Tite's attention had been attracted by a photograph in a window of some Roman remains, which proved to have been discovered in digging the foundation for rebuilding the old inn in Bridge-street, called the "Feather:s." On examining these excavations, Mr. Tite ascertained that they were the remains of a small temple or shrine, which had originally had twenty-four Corinthian columns; *four at each end*, and eight on each side of them. The remains of *ten* were in situ; portions of others were found and their foundations traced. Near them were the remains of baths. This memoir will appear in the *Archæologia*."

From the *Gentleman's Magazine* for March, 1864 (referring to the Society of Antiquaries):—"The Secretary, C. Knight Watson, read a paper by W. Tite, Esq., M.P., V.-P., on some remains recently discovered at Chester. It appeared that in the autumn of last year Mr. Tite was passing through Chester, when his attention was attracted to a photograph in a shop window of some apparent Roman remains, which led him to make further inquiries, when he found they were discovered in digging the foundations for rebuilding the old inn in Bridge-street, Chester, called the 'Feathers'—a building supposed to be as old as the time of Edward III. On further examining these excavations, Mr. Tite found the distinct remains of a small temple or shrine. *This temple originally consisted of twenty-four Corinthian columns, four at each end and eight on each side. Of*

That temples originally existed in most or all of the Roman towns of Britain, there appears to be no reasonable doubt; and we possess a certain amount of confirmatory evidence of the fact, although their actual remains are exceedingly rare.*

* It is true that the foundations of large edifices are occasionally found, and that a religious character is frequently attributed to them. We have the high authority of Mr. C. Roach Smith in the three following instances, that the remains were probably those of a basilica or temple, viz.:—the Roman pillars and arches which formerly existed in the Reculver Church (*Antiquities of Richborough*, &c. p. 197);—the building, measuring 70 ft. by 50 ft., found at the Roman villa at Hartlip (*Collectanea Antiqua*, vol. 2, p. 9);—and the one of a similar character at Ickleton (*Journal of the British Archaeological Association*, vol. 4, p. 365);—but his remarks, applicable to each, that “nothing was discovered that could possibly determine the original destination of the edifice” (*Ibid*, p. 367), show that in the absence of more positive proofs, we can scarcely cite these remains as being those of undoubted temples.

these, *ten* remain in their places—that is, there were *ten bases* and considerable portions of the shafts. Other fragments of the shafts and portions of the capitals were found in the rubbish, *and the foundations of the twenty-four were to be recognised*. The diameter of the columns was 2 ft. 3½ in., and the intervals or intercolumniations about 11 ft. 9 in. Round this small temple, which doubtless had a statue in the middle, were the remains of the baths, one of which (supposed to be the hypocaust) was the subject of the photograph exhibited in the shops of Chester. The discovery had excited much interest in Chester, and in the local papers accounts of the discoveries had constantly appeared. The Marquess of Westminster, to whom the land belonged, had requested the site to be cleared out, and his architect, Mr. Hodgkinson, had ably seconded his wishes. The account of the discovery appears to be the following. In the month of June last, in digging the foundations, the workmen came upon two distinct portions of ancient buildings. On the eastern side was a space of about 23 ft. square, which was supposed to be the hypocaust of a bath, from the presence of between sixty and seventy stone pillars, 32 in. high, with capitals 12 in. in size, somewhat similar to those discovered in the buried city of Wroxeter. The absence, however, of any blue tiles, led Mr. Tite to infer that these pillars were merely intended to protect from damp the superincumbent tessellated pavements. About a fortnight after the discovery of this so-called hypocaust there was found to the north of it the base of a Roman column, 27½ in. in diameter across the top, and 4 ft. 8 in. high, resting on a square block of red sandstone, *standing on the maiden rock*. At the distance of 11 ft. 9 in. the base of a second column of similar mouldings and proportions was met with, and subsequently a third and a fourth, between the last of which are the remains of a Roman wall, 14 ft. deep, cut in the solid rock. In the front of these bases, and at a distance of 39½ ft., have been discovered the bases of six columns, forming part of the other side of the temple. This was the state of things when these remains were first unately seen by Mr. Tite. He immediately perceived that the ruins were of the same date and character as those discovered at Bath in 1780, and which are extremely

Tacitus describes his hero Agricola, as encouraging the Britons to erect temples, &c. ("ut templa, fora, domus exstruerunt"); and at a later period, makes several allusions to "the temple erected to the deified Claudius at Camalodunum (*Colchester*.)" That this was a large and important structure is presumable from the circumstance, that at the time of the Boadicean revolt, the Roman soldiers "relied upon the shelter and strength" of this temple, to protect them, but it was taken by storm "after two days siege."* Spartian, in his "*Life of Severus*," distinctly mentions the existence of a temple of Bellona at York.† And Giraldus, in the 12th century, mentions having seen at Caerleon, amongst other remains, "relics of temples, and theatres, all inclosed within fine walls, parts of which remain standing."‡

* *The Annals of Tacitus*—Bohn's edit., p. 374.

† "Coming to the city, and desiring to offer sacrifice, the Emperor was conducted first, by a rustic soothsayer, to the temple of Bellona," quoted in Wellbeloved's *Eburacum*, p. 74.

‡ *Historical Works of Giraldus Cambrensis*, by Thomas Wright, p. 372.

well exhibited in the works of Lysons and Carter, and also preserved with great care in the Museum of that city. Mr. Tite caused a careful plan to be taken of all the remains, in which he was much assisted by Mr. Hodgkinson. In the paper read he stated that though, in Britain, Roman walls, pavements, arches, &c., were constantly found, yet he had never before seen the remains of any columnar architecture: even London had never produced any traces of such decorations. The paper was fully illustrated by remarks on the city of Chester, *the Deva of the Britons and the Castra of the Romans, the residence of the tenth legion, called 'Victoria Victrix,'* and forming a garrison of 5,000 men. There were drawings also of the ruins as Mr. Tite saw them, photographs, and a beautiful restoration of the whole building, with its baths, palaestra, gardens, &c., a restoration of the temple or shrine, which must have been 110 ft. long by 39 ft. 6 in. in width, and a comparison of the Corinthian order at Chester, and its ornaments, as compared with those found at Bath. The paper was received with much satisfaction, and it was considered fortunate that so complete an account of remains so interesting had been thus accidentally preserved, as it appears that except the bases, capitals, and fragments deposited in the Museum at Chester, the whole of the remains have now been swept away to construct the foundations of the new buildings." [The last two lines printed in *italics*, which are singularly incorrect in terms, are no doubt the result of imperfect reporting.] This notice (in the *Gentleman's Magazine*) is freely quoted in the Rev. H. M. Scarth's work on "*Aquæ Solis*" (pp. 17-8), and a comparison is there instituted, between the supposed temple at Chester, with the one at Bath. It will be seen that the sentences printed in *italics* materially differ from the statements made in the present paper (*vide* pp. 51-6-7.) Upon the accuracy of these data, wholly depended the probable correctness of the opinions which have been expressed, as to the nature and character of these columnar remains.

Fragments of architectural decoration, and of sculpture, that had evidently formed portions of a Roman religious edifice, are rarely found; but proofs of the actual sites of such buildings, are still more uncommon. The remains and sites of two were discovered at Bath during the last century.* “Considerable remains are said to have been found, and perhaps still exist under ground, of the temple” of Minerva at Coccium (*Ribchester*).†

Dedicatory tablets, commemorating the erection of temples, have been dug up at York,‡ Chichester,§ and Tynemouth.|| Whilst others,

* Search’s *Roman Remains of Bath*, pp. 12 to 25, contains a full and illustrated account of these most interesting remains. It states, at p. 13, “Of these buildings one appears to have been the Temple of Minerva, the other that of Diana the Charioteer; at all events the pediments of the buildings contain the emblems of these divinities.” It is rather remarkable, that prior to the discovery of these fragments, a tradition existed, that a temple of Minerva, originally occupied the site of the present Abbey Church. A stone, measuring 52 in. by 40 in., sculptured with a head of Medusa, was found at Caerleon;—“it belonged, apparently, to the pediment of the building, and bears a striking resemblance, though of far inferior workmanship, to that which is now preserved in the Museum at Bath.” Lee’s *Isca Silurum*, plate 9 and p. 25.

† Wright’s *Celt, Roman, and Saxon*, 2nd edit., p. 176. The Mithraic sculpture found at York (Wellbeloved’s *Eburacum*, p. 80, and plate 9), and the Mithraic cave at Borecovicus (*Housesteads*) on the Great Wall (Bruce’s *Roman Wall*, pp. 404, *et seq.*), may be cited as other examples. The Marble Capital, found at Silchester, “probably belonged to a temple, or some other public edifice” (*Archaeological Album*, p. 152). The following paragraph appeared in *The Builder* of Dec. 8, 1866:—

“FOUND AT LAST.—Some important discoveries of Roman remains were made at Lydney, in Gloucestershire, not long ago, and involved a very curious incident. Among the remains of a temple dedicated to the god Noden, found there, was a brass plate on which was an inscription offering a reward for a ring, and stating that in the event of its being found some portion of the money would be dedicated to the god Noden, but that if any person who found it failed to restore it to the owner the curse of Noden would be upon him. Most singular to say, a ring corresponding with the lost one, and bearing the name of the person offering the reward, has been found at Silchester!”

‡ Dedicated to the Egyptian God Serapis (Wellbeloved’s *Eburacum*, p. 75, and plate 9).

§ Dedicated to Neptune and Minerva (Wright’s *Celt, Roman and Saxon*, pp. 29 & 176).

|| Combined with a basilica, &c.—“cum basi et templum” (Bruce’s *Roman Wall*, p. 319).

recording the restoration or rebuilding of similar structures, have been found at Caerleon,* and at several of the Stations on Hadrian's Wall.†

Many of the important Roman towns, such as York, Leicester, Wroxeter, &c., have yielded no remains of temples‡ Their paucity may be accounted for to a certain extent. It seems probable, that many of these structures were ruined or altogether destroyed, during the successive invasions of the Northern barbarians, the early Saxons, and the Danes. The love of plunder, associated as it ever appears to have been with that of wholesale destruction of everything unable to be carried away, led to the early demolition of numbers of scattered Roman villas, as well as of large and populous towns. Many of them bear evidences of having been destroyed by fire.§

The iconoclastic enthusiasm of the early Saxon Christians led to further destruction of edifices of a religious character,|| notwithstanding

* On the restoration of a temple of Diana (*Isca Silurum*, p. 10, and plate 3.)

† At Benwell and Chesters (Bruce's *Roman Wall*, pp. 140 & 186). The inscription on one discovered at Castlesteads is thus translated in *Collectanea Antiqua*, vol. 4, p. 42: "Caius Julius Cuspitianus, a centurion, at his own charge, restored this temple to the Mothers of all nations (Matribus omnium gentium), which had long before fallen down from the decay of age."

‡ There is a well-known tradition of one, dedicated to Diana, having occupied the site of Saint Paul's, London. It has been suggested that the Jewry Wall at Leicester, formed a portion of one erected in honor of Janus.

§ Mr. Wright (*Celt, Roman & Saxon*, 2nd vol., p. 393) affirms "that all the Roman towns on the Welsh borders to the north of Gloucester were destroyed, apparently before the period of the Saxon invasion." The remains of numerous villas in the neighbourhood of Bath "seem to indicate that they were hastily plundered and then set fire to, and that the roofs and timbers fell in upon the floors, which are often found indented and covered with burnt matter and roofing tiles" (Scarth's *Roman Bath*, p. 128). In addition to these proofs, there have been found at Ribchester, Silchester, and Wroxeter (more particularly at the latter place) numerous skeletons among the debris, in positions where they had probably taken refuge from the plundering enemy. The Bridge-street remains, contained evidences of having been wilfully destroyed, such as the mutilated hypocaust and pavement (*vide* pp. 12, 3); and the numerous fragments of wood charcoal scattered among the debris, and forming an imperfect layer immediately above the undisturbed ground. A large mass of wood charcoal was found impacted in the dowel hole of one of the capitals. The large nail (alluded to at p. 51) had a thick covering of rust, containing fragments of stucco and wood charcoal.

|| Mr. C. Roach Smith (*Roman London*, p. 6) remarks, "those only who have made the monuments of Antiquity a special study, can at all form a notion of

the efforts of one of the Popes to prevent it.* Now although the invaders, prior to the time of the Normans, were great destroyers of all classes of buildings; and that the later Saxons, probably erected their dwellings from the ruins; yet the period of the 11th and 12th centuries, appear to have been the most destructive to them. The Norman and Mediæval Architects required an immense quantity of material, for the erection of their numerous religious houses, cathedrals, castles, &c., and availed themselves of that furnished by the ruined sites of the Roman buildings, which they looked upon as a kind of quarry for the purpose. Those remains which were constructed of better materials, such as temples and public buildings, would therefore suffer the most.† Their removal would be also more complete in towns which continued to flourish, such as London, York, and Chester; than in those which were never re-built, as Wroxeter and Silchester.‡ When all these points are considered, it will scarcely create any wonder why the remains of Roman temples are so rare in Britain.

It will now be necessary very briefly to review the essential point of Roman temples of the quadrangle form. The most important part was the *naos* or *cella* (the sacred place into which few but priests were permitted to enter, especially in those temples where oracles were delivered), containing a statue of the divinity, with an altar in front of it. It was built of plain straight walls, rising to the roof, without windows, light being obtained from a hole in the roof, or from the entrance doorway. To the *cella* every other part was secondary. All

* Bede's *Ecclesiastical History* (by J. A. Giles, chap. 30, pp. 55-6) contains a copy of the letter which Pope Gregory sent to the Abbot Mellitus, then going to Britain (A.D. 601), in which he directs that the temples "of the idols in that nation ought not to be destroyed;" but should be purified and then used as Christian Churches; adding "but let the idols that are in them be destroyed."

† So that it is far from being unlikely that some of the stone required for the erection of St. John's Church, and of Chester Cathedral, may have been obtained from the ruined Roman structures in Bridge-street.

‡ Wright's *Guide to Wroxeter*, 2nd edit., pp. 17, *et seq.* H. E. Smith's *Reliquiæ Isurianaæ*, pp. 13, 4. Lysons' *Account of Roman Antiquities discovered at Woodchester*, p. 19.

the extent to which, in the earlier days of Christianity, iconoclasm was carried." According to the *Anglo Saxon Chronicle*, Earconbert in the year 640, "overthrew all idolatry in the kingdom." Turner's *History of the Anglo Saxons*, book 3, chap. 7, contains a full account of the circumstances, which led to the destruction of a temple at Godmundham, during the early part of the same century."

quadrangular temples were oblong in form, but varied considerably in the number and arrangement of their columns, according to certain fixed rules. The external beauty of the structure depended upon its columns and pediment.*

Some temples had columns at one end only (*In Antis* and *Prostyle*); others at both ends, making the structure as it were, double fronted (*Amphiprostyle*): in either case, the building was small. The majority had, in addition, columns along the sides. When these lateral rows were single, they were called *peripteral*; when double, *dipteral*. Another set of names was based on the number of columns in the front portico. Assuming for the moment, that the Bridge-street remains were those of a temple surrounded by 24 columns, it would be called a *tetrastyle, peripteral* example: *tetrastyle*, from having four columns in front, and *peripteral*, because of the single row on either side. The number of lateral ones always bore a relative proportion to those in the front. Another division consisted in the varying lengths of the intercolumniations (the distance between two columns), which were reckoned according to the number of diameters, *e.g.*, the Bridge-street columnus, according to Vitruvius, would be called *arcostyle*,† the distance between them being considerably more than three diameters.

Turning our attention to the columnar remains of Bridge-street, let us first examine all the points adverse to the theory of their having originally formed a portion of a temple:—

1. Temples were usually placed in commanding eminences, or were raised on a podium or elevated base, and approached by a flight of steps. In Bridge-street, the structure was not erected on anything approaching the character of an eminence, but on a gradual slope, and its level was not above that of the surrounding buildings.

* In Classical Architecture, the *pediment* was the triangular termination of the roof at the ends of buildings, corresponding to the gable of Mediæval Architecture, than which it was less acute. The *tympanum* was the triangular space, enclosed between the horizontal and sloping cornices of the pediment, and was frequently decorated with sculpture.

† The following measurements refer to the columns marked I. to V. in the general plan (South side):—

Columns.	Distance from centre to centre.		Distance from centre to centre. (intercolumniation)	
	ft.	in.	ft.	in.
I. to II.	11	10½	9	5½
II. to III.	11	2½	8	9½
III. to IV.	12	5½	9	0½
IV. to V.	11	7½	9	2½

2. Being surrounded on three, and probably four, sides by walls.

3. There was not the slightest trace of the site of any columns, answering to the front and back porticoes of a temple.*

4. Allowing, for the moment, the existence of these end pillars, forming a tetrastyle temple, it is known that the Romans, in the instance of a temple of this variety, *never used pillars at the sides*, except false ones attached to the walls.†

5. The intercolumniations of the front (assuming their existence), and of the side columns were different.

6. The building was relatively too long for its breadth. The Roman rule was to have *twice as many intercolumniations along the sides as in front*, instead of which the proportion was as three to one. Vitruvius (book 4, chap. 4) directs, that "the length of a temple must be twice its width," but the outside measurements of the quadrangle of the Bridge-street structure, were 42 ft. broad by 110 ft. long, a proportion of 1 to 2·61.

7. The number of lateral columns was an even, instead of being an odd one.‡

8. No bas-relief, figure, or portion of sculpture of any kind were discovered.§

9. There was not found the slightest vestige of any moulding of pediment, cornice, or entablature, or Architectural decoration of any kind, excepting those belonging to the columns.

* (*Vide* pp. 51 and 57. The level being undisturbed sandstone rock, rendered it the more probable, that had there been any terminal columns, they would have left similar traces to those in the lateral rows, the excavated sites of which (even where the bases were absent) were very evident. Had any originally existed, their foundations must have been different in character to those of the others.)

† As in an instance at Rome—*vide* art, *Templum* in Smith's *Classical Dictionary*.

‡ Following the two rules given in 6, the number of lateral columns should have been seven, the number of lateral intercolumniations would then have been double that of the front, and the length of the temple would have been twice the breadth. An even number always existed at the front, otherwise one would have marred the effect by being under the centre of the pediment; and by hiding the principal doorway, would have obscured a proper view of the statue.

§ At pp. 80 *et seq.* is an account of a fragment of inscription found on the site. This only tended to prove the public character of the buildings, on the outside of which it was common to fix an inscription of a dedicatory character.

10. A searching examination of the quadrangular space, formed by the pillars, failed to discover the slightest trace of either wall, or wall foundation of a cella, or where a statue had stood.*

On the other hand, what are the facts in favour of the temple theory. There are literally none beyond the existence of two rows of pillars, and the remains of an inscribed slab; and there was nothing in the character of these to militate against the probability, that they belonged to a public edifice, of a totally different stamp to that of a temple. The designer, it has been said, would not of necessity follow the ordinary rules of temple construction; but it is unfair and improbable to assume that a Roman architect in DEVA, however he might in practice modify some of these rules, would deliberately violate the whole of them. There appears therefore no reason to believe that the remains formed any portion of a Roman temple.

Prætorium.—It may be suggested that the site was that of the Prætorium—the tent of the Roman general (*Prætor*), when Deva was but an intrenched camp, and the permanent structure which succeeded it. The leading features of the temporary camp, were apparently followed in the subsequent arrangement of buildings, &c.; and the present City of Chester, in its external quadrangular form, as well as in its internal division into four main streets, preserves more of the characteristics of a Roman city, than any other in England. The Prætorium would occupy the central position marked by the junction of the four streets; and common report, as well as the opinion of many archaeologists, has pointed to the site at present occupied by St. Peter's Church.† Let any one compare a map of modern Chester, with the plan of an ordinary Roman camp,‡ and he can scarcely fail to notice, that the very fact of the lower part of Northgate-street, not being in the same continuous straight line with Bridge-street, serves but to confirm the correctness of this supposition.§ Amongst the rules laid

* If a cella had existed, it must have been exceedingly narrow, and certainly not more than 13ft. inner measurement, as its wall would be situated at the distance of an intercolumniation from the lateral columnis.

† Churches appear to have been often erected where *Prætoria* had stood—vide Wellbeloved's *Eburacum*, p. 64.

‡ See the plan of a *Tertiata Castro*, and that of *Augusta Londinum*, at pp. 559-60 of Fosbroke's *Encyclopædia of Antiquities*.

§ "I imagine that this building, St. Peter's Church, and a few houses to the north and west, occupy the site of the *Roman Prætorium*; for they not only fill

down by Hyginus,* are the following:—"Those situations have the first place which rise from the plain in a gentle eminence, in which position the Decuman gate should be placed on the highest spot, that the country below may be under the camp. The Prætorian gate ought always to face the enemy. There ought to be a river or spring in some part of the position." These rules appear to have been closely adhered to in DEVA. The Decuman gate, seated on the highest ground, would be to the north, from whence the ground gradually sloped down to the south or Prætorian gate, near the river. The Prætorium in the centre, would face the Prætorian way, represented by the existing Bridge-street, and in a straight line would overlook the Roman road passing through the Shipgate, across the Dee, by the side of the rock sculptured with the figure of Minerva (Edgar's cave), and into and along the line of the present Eccleston lane.†

There does not, therefore, appear to be any sufficient grounds for believing, that the Prætorium occupied any other site than that now marked by St. Peter's Church.

Shrine or Stoa.—The objections to the columnar ruins having belonged to a temple, apply almost equally to the suggestion of their

* A writer of the time of Trajan—quotation from his "De Castrametatione," in Fosbroke's *Encyclopædia of Antiquities*, p. 564.

† In the last paper read before the Society by the Rev. W. H. Massie (*Journal*, vol. 1, p. 460), he pointed out that "if any person had chanced to be walking towards Chester after dark, as he had often done from Eccleston, they would see, right before them, the lights on each side of the higher end of Bridge-street, with the illuminated clock of St. Peter's in the centre. *There, then, was the straight Roman road in its integrity.*"

the very situation of that part of the old castrametations, but account for the discontinuance of the *Bridge-street*, which ceases opposite to these edifices. This also is the cause why the nearer part of the *Northgate-street* is thrown out of its course, and falls into the *Eastgate-street*, many yards beyond the mouth of the *Bridge-street*; for the lower part of the *Northgate-street*, where the exchange and shambles stand, points directly towards the former; but is interrupted by the space occupied by these buildings. The limit of the *Prætorium* on the east, was the narrow portion of *Northgate-street*; on the south, part of the present *Bridge*, *Eastgate*, and *Watergate-street*; on the west, *Goss-lane*; and on the north, the space now occupied by the public market." (Pennant's *Tour in Wales*, 1st edit., vol. 1, pp. 168-9.) The central position of the *prætorium* appears to have been overlooked by the Rev. W. H. Massie, when he remarked that the deviation of the line of *Northgate-street* was "a complete diversion from the original plan of the Roman city." (*Chester Archaeological Society's Journal*, vol. 1, p. 459.)

having been those of a shrine, or of a place for statuary (stoa). Their great extent seems to be much opposed to the latter, more especially when it is borne in mind that Chester was a purely military colony.*

Forum-Basilica.—As all the facts appear to be adverse to the idea, that the columns belonged to a temple, or to a prætorium, we may now enquire whether they may not have formed the portico of a forum, or of a basilica.

The *forum* of a Roman town, was the place where all business was conducted, justice was administered, and public affairs deliberated upon. It was the general market place, and the great resort of all those interested in the reception, discussion, and distribution of gossip and news. Moreover, games were frequently held there. It appears to have been usually a large, oblong, quadrangular space, near the centre of the town, into which fronted many of the principal buildings, such as temples, halls of justice, senate house, baths, and places required for public convenience, and was generally surrounded by a portico. As cities extended their limits, and the one forum was insufficient for their requirements, other fora were made in different parts, and were appropriated to distinct and separate purposes.

* It is a very singular circumstance that at Caerleon, York, and Chester, the head-quarters of Roman legions (2nd, 6th, and 20th) very few tessellated pavements have been discovered, and those few invariably of coarse execution; thus presenting a striking contrast with the magnificent examples found in London, Lincoln, &c., and on the sites of Roman villas. Further than this, none have as yet been met with at any of the Stations of the Great Wall. That DEVA was essentially a military colony throughout the entire Roman occupation of Britain is beyond dispute; but that it was even more exclusively military than either York or Caerleon is very probable. We learn this from the circumstance of the absence of all remains of detached villas, so common in the South of England, in the neighbourhood of those colonies inhabited by civil communities. (Several have been discovered on the Welsh border in Shropshire and Herefordshire. The Roman *Isurium* appears to have been a kind of wealthy country town pertaining to York). Again in Chester there have been found but few specimens of the more highly-finished varieties of monuments, sculptures, statuettes, and articles of decoration generally. There has been a striking absence of engraved intaglios, such as those dug up at Wroxeter, and those at the Station of *Petiana*, on the Great Wall. (Impressions of the latter were exhibited at a lecture recently delivered before our Society by the Rev. E. R. Johnson). And last, though certainly not least, there has been a singular dearth of all kinds of personal ornaments (more particularly of those belonging to the female sex), such as fibulae, combs, hairpins in bone and bronze, &c.—articles which have been found in abundance at York, London, Lincoln, Leicester, and most Roman Stations.

Amongst the principal buildings opening into the forum, was the justice or town hall,—the *basilica*. This was a square, oblong structure, divided into three longitudinal spaces; the lateral ones or aisles, being narrow and roofed, the centre, wide and open. At the end, opposite the entrance, sat the presiding judge, for whose better convenience a semicircular apse was added in later times.*

We have no reason to believe that the Roman towns in Britain differed from those of Italy, in having these necessary adjuncts. Probably in some of the smaller towns, the one structure served for both purposes. At Bath, a parallel ogram in the centre of the city answered to the forum, at corners of which “three principal buildings existed in Roman times;”† and “it is not improbable that the site of the present abbey was occupied by some Roman building, which may have been the *basilica*.”‡

At Wroxeter, the researches of Mr. Wright have shown, that the forum there also occupied the central position, some of the streets apparently passing into and through it; and that the basilica opened into it.§ This latter was found complete with reference to its foundations, of oblong square form, 226 feet long by 60 feet broad, divided into two side aisles and a central space; the latter being 30 feet wide, and paved with herringbone bricks. The north aisle contained tessellated pavement. At the west end, there were indications of a large entrance gateway; and at the east, a central door opening into a square hall.|| Mr. Wright states, that “portions of the capitals, bases, and shafts of columns were found scattered about in different parts of the area,”—so that the side aisles were probably separated from the central portion by columns.

* Many of these basilicas were subsequently converted into Christian Churches, for which they appear to have been eminently well-fitted, the general model being followed to this day,—the altar occupying the apse. Some of the churches in Rome are still known by this name. The Roman basilica at Treves (usually called the “Palace of Constantine”) is stated by Mr. C. Roach Smith to be “one of the finest and most perfect examples extant,” being 225 feet in length, and terminating in an apse, which is separated from the nave by a grand arch, of a span of 60 feet.” *Collectanea Antiqua*, vol. 2, p. 91.

† *Journal of British Archaeological Association*, vol. 17, p. 12.

‡ *Notices of Roman Bath*, by Rev. H. M. Scarth, p. 13.

§ *Vide* Chester Society’s *Journal*, vol. 2, plates at pp. 310 and 312 illustrating the Paper on Uriconium, by Mr. Horatio Lloyd, Recorder of Chester.

|| Lettered ‘Chalcidicum’ in Mr. Lloyd’s plan.

A comparison of the Bridge-street structure with the Wroxeter basilica, at once points out several striking features of resemblance.

1. The buildings being of an oblong quadrangular form, and their direction being due east and west.

2. Their similar position with reference to the centre of the town, and also to the south and east streets.

3. In their space being longitudinally divided into a wide central area and two narrow lateral ones. (In the Chester instance this statement assumes a similar construction on the north side, to that found to exist on the south.)

4. In the existence of an enclosed space at the east end (the 'chalcidicum'.)

The Wroxeter basilica was certainly one-third longer than the Chester building; but the direction, form, construction, and position of the latter, offer such a striking resemblance to the former, that it seems only reasonable to adopt the conclusion that it was the *BASILICA* of Roman *DEVA*.*

Public Baths.—We had now better devote our attention to the consideration of the remains of the building adjoining the columns.

The most important suggestion that has been made concerning them, is that they comprised a portion of the public baths (*thermæ*) of the city. Before we can decide upon this, it will be necessary to make a few remarks upon the Roman system of bathing, and the building arrangements it required.† In this country, many private baths have

* In a Paper on the "History of St. Nicholas Chapel," in the *Chester Society's Journal*, vol. 1, pp. 255-6, the Rev. Canon Blomfield alludes to the circumstance, that the old Town Hall of Chester occupied the site of the present Alms-houses in Commonhall-lane, and suggests, that it "might have been the hall of justice, which was appendant in all Roman towns and provincial stations to the military camp." Singularly enough this site is on the west side of Bridge-street, and nearly opposite the recently discovered remains, which appeared to be those of the Roman basilica.

† In Rome, bathing does not appear to have been employed to any great extent until the reign of the Emperors, who encouraged its practice by the magnificent public *thermæ* erected under their auspices. Employed at first as an act necessary to health, it degenerated into a luxurious indolent practice, and by its enervating effect, was probably one of the many causes, which led to the decay of the Roman Empire. Wherever the Roman arms were carried, baths were speedily introduced. With the fall of the Empire, they too fell into disuse at Rome. It was, and is still, practised by various nations under different forms, and was adopted by, amongst others, the Turks. Within the last few years it has been reintroduced into England under the name of the Eastern or

been discovered on the sites of the villas of wealthy Romans; whilst at Bath, Wroxeter, Caerwent, &c., have been found the remains of public thermæ, as well as of dedicatory inscriptions commemorating their erection or restoration; leading us to believe that every Roman town had its public bathing institution. A building of this kind would essentially require four rooms, the usual number being much greater; and consisted of the *Frigidarium*, or cold chamber, the *Tepidarium*, moderately heated, the *Calidarium*, or hot room, and the *Balneum*, or *Lavatorium* for the final washing and scraping. The remains of the one at Caerwent are complete, and although it is a small example,* a brief description of it will serve to show the Roman practice. The entrance door of the baths opened into the *Frigidarium*, the only room of the series destitute of a hypocaust: it was paved with red tessellæ and served as an entrance hall. Passing into the *Apodyterium*, or undressing room, the bather would undress, and then enter the *Tepidarium*, intermediate in temperature between the undressing and the hot room; he would then go in to the *Calidarium*, and gradually to the hottest portion of it (*Sudatorium*), situated immediately over the furnace (*præfurnium*), where having perspired as freely as might be thought desirable, he would proceed to the warm bath (6 feet by 3 feet, and 2 feet deep), a tank situated over the hypocaust, and surrounded on three of its sides by flues. Here sitting on the labrum or edge of the bath (a seat was usually built in the bath itself, so as to be below the surface of the water), he would have to undergo a kind of scraping operation with a *strigil*.† This would be followed by copious ablutions

* A full account of their discovery, &c., appeared in vol. 36 of the *Archæologia*, as well as in Lee's *Isca Silurum*.

† This was an instrument made of bronze or iron, and consisted of a curved hollow blade, with moderately sharp edges, attached to a handle (sometimes looped, sometimes solid.) With this the bather was scraped from head to foot, so as to loosen and remove all the scurf skin and impurities (very similar to the process of currycombing a horse), and cannot always have been a pleasant operation; in fact, there are several anecdotes extant upon this point. M. Luetonius remarks, that the Emperor Augustus, on one occasion, suffered severely from its use. In the present day, shampooing and friction with the flesh brush or glove have been substituted for it. It appears to have been used by an attendant in the case of the wealthy, and by the bather himself when poor. In Montfaucon's *Antiquité Expliquée*, vol. 3, supplement plate 61, there is repre-

Turkish Bath, but this term is incorrect, as the English follow the Roman method. In the former, warm moist vapor is employed; in the latter, dry air of a much higher temperature.

of warm water, and the bather would retrace his steps to the Frigidarium, and after a dip in the cold bath (a tank $10\frac{1}{2}$ feet by $5\frac{1}{2}$ feet, and 3 feet deep) he would be dried, anointed,* resume his clothing, and return home.

Do the apartments at Chester, adjoining the site of what has been termed the Basilica, come up at all to this description of the Caerwent baths. It must be confessed that they do not. It is true that all the apartments had hypocausts, but as far as could be observed, they appeared rather for the purpose of protecting the pavements, than for the conveyance of heat. There was no præfurnium, no flue tile in position, no indication of a hot or a cold bath, or tank of any kind. There were some doubtful traces of the action of fire at the south-west angle of the first hypocaust. So that there was no positive evidence in the character of any of the chambers, that they formed any portion of public baths; nevertheless there are some circumstances to notice, which strongly favor the view that they belonged to the *thermæ*.

Baths and Basilica.—It appears to have been a very common practice to erect the basilica and public baths contiguous to each other, so as to form a portion of one structure; and we have the high authority of Mr. Wright, for stating that these two great public buildings usually joined each other.† Several examples may be mentioned.‡

* In a fresco painting on the walls of the *Thermæ* of Titus at Rome, there is a representation of the *Elæothesium*, or anointing room.

† *British Archaeological Association Journal*, vol. 16, p. 160.

‡ At the Roman Station at Tynemouth was found a mutilated inscription commemorating the erection of some public edifice with a basilica and a temple ("cum basi et templum fecit.") Bruce's *Roman Wall*, p. 331.

sented a figure seated on the labrum of a bath, and scraping his leg with a strigil; and in Knight's *Popular Pompeii*, pp. 168–9, is a figure of a 'slave with a strigil,' copied from an Etruscan vase, and woodcuts of several different forms of these instruments. Examples have been found in England at Wroxeter, Reculver, Gloucester, &c. Two were exhumed from a tumulus on Bartlow Hills, Essex, and are figured in vol. 26 of the *Archæologia*, and described as being "elegantly curved, with a small opening in each handle; their length up to the curve is eight inches, and the curve is six inches and a half in length; the weight is about four ounces each" (p. 304.) There are five of these instruments in the museum formed by the late Thomas Bateman, Esq., at Yolgrave, near Bakewell, Derbyshire, one of which is peculiar from having the figure of a warrior stamped on the handle. The edge of the strigil was oiled by means of a small bottle, and many of the so-called lachrymatory bottles dug up with other Roman remains, may have served this purpose.

1. An inscription found at Ribchester (Coccium) records the rebuilding from the foundations of the baths, and basilica which had decayed from age. ("Balneum reffectum et Basilicam vetustate conlapsam a solo restitutam.")*

2. From an inscription dug up at Lanchester (Epiacum) in Durham, we learn that Cneius Lucilianus, in the reign of Gordian the third, erected baths and a basilica there. ("Balneum cum Basilica.")†

3. Their probable juxtaposition at Bath has been already alluded to.

4. Their conjoint existence at Wroxeter has been proved by the labors of Mr. Wright.‡ The baths being on the south-side of the basilica, and occupying a quadrangle measuring 185 ft. by 175 ft. The building in Bridge street, Chester, which occupied a similar position to that which we have called the Basilica, was at least 175 ft. in length, (and probably extended much further on the east.) There was no clue whatever as to the probable breadth; the portion uncovered being a mere strip of what was evidently a very extensive building, and as already been stated did not show the width of a single apartment. That the existing hypocaust, called the "Roman Bath" formed a part of the same structure is certain, and at this part the building was at least 53 ft. broad. During the alteration of the premises, immediately above this hypocaust in 1852, the Rev. W. H. Massie saw "long rows of the hollow-tile or brick, *in form almost of a honeycomb*, once acting as flues or cells for heated air, but in after times filled up with gravel and rubbish.§ This construction indicates that it was the same as that of a calidarium. The general character of the more recently discovered apartments bore a strong resemblance to those of the Wroxeter baths; in addition to the similarity of their position with respect to the forum and basilica.

A comparison of the plans of Roman Bath, Wroxeter, and Chester, will strengthen the correctness of the generally received opinion, that Roman towns (in Britain, at all events) were laid out pretty much on the same model; and that many of the public edifices occupied the same relative position in each, both with regard to the principal streets, as well as to each other. These three examples exhibit strong evidence that the forum was similarly situated with reference to the four main

* Whitaker's *History of Richmondshire*, vol. 2, p. 213.

† Roger Gale in *Philosophical Transactions*, vol. 30, p. 827.

‡ (*Vide* Mr. H. Lloyd's paper on Wroxeter, in *Society's Journal*, vol. 2, pp. 309 *et seq.*)

§ *Society's Journal*, vol. 1, p. 356.

streets which divided the city, its site being central or east central ;* that the basilica was at the east end of the forum ;† and that the public baths were placed on the south side.

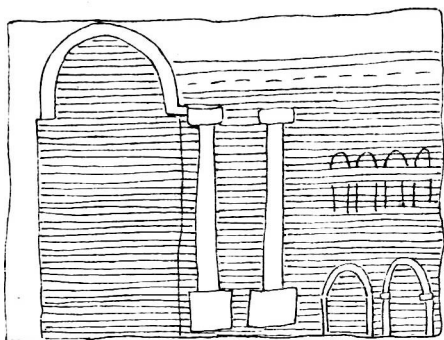
At Wroxeter the modern antiquary has had the advantage of uncovering the site of the entire range of these public buildings, but in a city like Chester, it is hopeless to expect that anything of the kind can take place at one time. Absolute proof of the true character of these Bridge-street remains (more particularly of the mural), must be waited for, until by some fortunate occasion, future excavations expose more of the southern portions lying under the adjacent modern premises, and contiguous to the "Roman Bath ;" but for the reasons already named, insufficient although they may appear to be, I am strongly of opinion *that they formed a portion of the Public Baths, that they joined the Basilica, and that both opened into the space on the West and North sides, which formed the Forum of the Roman DEVA.*

The Chester basilica must have measured internally about 132 ft. long by 74 ft. broad ; the entrance being at the Bridge-street end, to which the fragment of a wall and the remains of some small pillars probably contributed. At the west end, a central doorway most likely opened into the enclosed space which has been termed the "Chalcidicum." It is uncertain how the lateral and central areas were paved, probably with the small bricks laid in the herringbone form, but the whole of it appears to have been cleared away in very early times for the sake of the materials. That the lateral aisles were roofed over is rendered more probable by the great strength of the main wall, and also by the existence of a narrow alley, opening into it at the east end, which closely resembled the termination of a long covered way (*cryptoporticus*) so common in Roman buildings, private and public. This connecting roofing may have been of the barrel form as exemplified in the "Old Wall" at Wroxeter, and shown also in a rude bas-relief, found at Netherhall, and described by Alexander Gordon‡ as "the

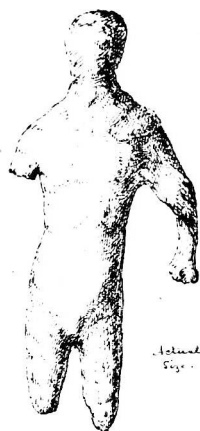
* It has been supposed that the forum of the Roman town (of Silchester) was situated not far from the centre of the town (*Archæological Album*, p. 152).

† The Wroxeter and Chester discoveries strongly confirm the suggestion of the Rev. H. M. Scarth, to which allusion has already been made, that the Abbey of Bath occupies the site of the Roman Basilica. The direction of these structures being east and west is a noteworthy circumstance—this was even the case with the Basilica at Pompeii.

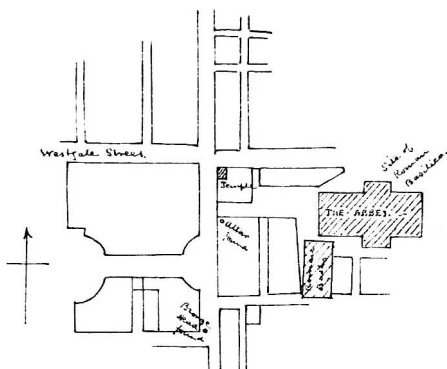
‡ *Itinerarium Septentrionale*, p. 100 ; plate 34, fig. 3. Engraved also in Horsley's *Britannia Romana*.



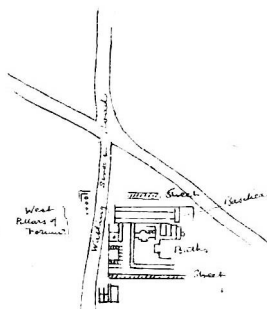
BAS RELIEF
FOUND AT NETHERMALL
vide p. 102



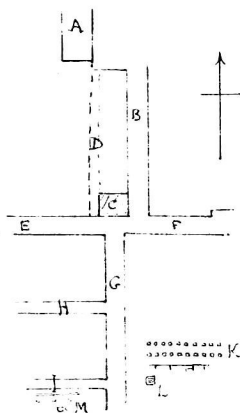
MUTILATED BRONZE FIGURE
OF MERCURY
FOUND IN BRIDGE STREET, CHESTER in 1863.
vide p. 103.



PLAN OF THE CENTRE OF
BATH.



PLAN OF THE CENTRE OF
WROXETER.



PLAN OF THE CENTRE OF
EXETER.

- A. New Town Hall
- B. Westgate Street
- C. St. Peter's Church - frontable side of Presbytery
- D. Line of original Roman Street?
- E. Westgate Street
- F. Eastgate Street
- G. Bridge Street
- H. Cornhill Lane
- I. Little Lane, formerly St. Stephen's Lane
- K. Roman Basilica and Baths? discovered in 1863.
- L. Existing Hyfaemum marked as "Roman Bath"
- M. Remains of Roman Colonnade back of Cornhill Basilica
discovered in 1854.

W. H. Stanger del.

Representation of a *Roman Bagnio*, with an arch and two *Dorick* pillars. As likewise a gallery with arches above and below." We have no means of ascertaining whether the columns supported a gallery, but their comparatively limited height (18 or 19 ft.) leads to the belief that they did. The basilica at Pompeii had one, as did also the forum. The columns of this latter were only 12 ft. in height, but in each instance they were similar to those of Chester in being *aræostyle* (*i.e.* the intercolumniations wider than three diameters of a column), and being so far apart, stone could not be employed for the architrave, wood being used instead. This portico would be available for the use of those who had been visiting the *thermæ*; and owing to the distance between the columns, everything that transpired in its central area could be readily seen. (Vitruvius, book 5, chap. 1, remarks that in Italy the columns of the forum were set wide apart for the convenience of the spectators witnessing the show of gladiators. Possibly, in a small city like *DEVA*, some games not requiring a large area might have been exhibited in the central area of the basilica.) There were probably steps at the end of the *thermæ* facing Bridge-street.

Miscellaneous Antiquities.—Whether it be owing to the site having been repeatedly examined at a very early period is now only a matter of conjecture, but certain it is that very few of the smaller class of antiquities, so frequently found amongst Roman remains, were discovered. The most important one was perhaps that found by the late Mr. Peacock, a small but mutilated bronze figure, wanting both legs below the knee, as well as the right arm; measuring $2\frac{1}{2}$ in. long in its present condition, but in its original state about 3 in. At first sight it appeared to be quite nude, but a careful examination revealed the existence of a small cloak or garment, resting on the left shoulder, passing behind it, and then around the left forearm. A comparison of it with similar examples found elsewhere showed, that it was one of the Roman *Penates*, and intended for the God Mercury.* It was dug

* A similar figure found with others at Exeter, forms one of the illustrations to Mr. Pettigrew's Paper on the subject, in the *Journal of the British Archaeological Association*, vol. 21, p. 220; one from the bed of the Thames is engraved in the *Archæologia*, vol. 28, plate 5, and in Mr. C. Roach Smith's *Roman London*; one found at Piersbridge is represented in the *Archæologia*, vol. 9, p. 289; and a wood cut of one dug up at Wroxeter, appeared in the *Illustrated London News* for April 30, 1859. A similarly sized bronze statuette of Mars, was found in Chester a few years since, and is now in the possession of Dr. Hastings.

up over the site of the first pavement. In different parts of the rubbish were found, a shapeless piece of bronze (which possibly was originally an ornament, and destroyed by the same fire which assisted in the destruction of the buildings), also, several coins, one, a second brass coin of the Emperor Domitian, which had been injured by fire, and eight of third brass size.*

Amongst the antiquities of a much later date, were many whole vessels, as well as fragments, of Norman and Mediæval pottery, found mixed with burnt wood in the irregular excavations in the rock below the Roman level; portions of a gargoyle, many fragments of Gothic tracery, and a piscina with a grotesque head rudely sculptured on it,†

* Four only out of the eight coins here referred to could be deciphered; and these, which are of the common types of the several Emperors named, read as follows:—

2nd. Brass.— *Obv.* IMP CAES DOMIT AVG GERM COS XV CENS PTRP.

Bust of Emperor Domitian.

Rev. VIRTVTI AVGVSTVS.

Mars standing, javelin in right hand, and trophy in left, between the letters S. C. (probably in allusion to some victory.)

This coin is much patinated, and bears palpable evidence of having been subject, at some period or other, to very severe heat.

3rd. Brass.—1.—*Obv.* DN VALENTINIANVS PF AVG.

Head of Emperor.

Rev. GLORIA . . .

Soldier, spear in hand, dragging captive (commemorating some imperial triumph.)

2.—*Obv.* The same as 1.

Rev. SECVRITAS REIPVBLICAE.

Female figure standing, holding garland and cornucopia.

3.—*Obv.* CONSTANTINVS . . .

Head of Emperor.

Rev. GLORIA EXERCITVS (in exergue PLC.)

Two helmeted soldiers standing by the side of two standards.

† These architectural fragments belonged, in all probability, to the once great church and monastery of St. Michael, which is known to have originally extended much farther to the northward than the present comparatively modern church. It should be borne in mind also, that the northern limit of the excavations now under review is at the same time the northern boundary of the ancient parish of St. Michael.

the material in each case being red sandstone; portion of a child's hornbook, and several white clay tobacco pipes of the sixteenth and seventeenth centuries.*

I have at last arrived at the end of this long account of the Roman remains so recently brought to light in the middle of this city, and unfortunately so soon removed from our gaze. Its length, indeed, is not of my own seeking, but is due to the expressed wish of the Society (*vide* p. 2), and which I have carried out as well as my professional engagements would permit.

In conclusion, I may remind my brother members that the question *may* be, nay, *is* often asked, as to the objects and uses of taking so much trouble in examining the remains of past ages,—the *cui bono?* in fact, of Archaeology; and those who make such enquiries are usually those who call into question the utility of History! Perhaps a better reply could not be brought forward than the remark of Cicero, that “not to know what has been transacted in former times is to continue always a child.” Archaeology gives a better insight into the manners and customs of the daily life of our predecessors, than can be afforded by ordinary History. It not only serves to illustrate the latter, but is also of use to correct the historian when faulty. Its study is therefore that of Man himself, and of his progress through successive centuries. How important is it then, that all the works and remains of the former inhabitants of this

* In taking down the “Feathers” Inn, a curious letter was found in the roof, and being not without interest to Chester archaeologists, is here given:—

“Mr. Potter,

“I am afraid you have been ill or else fancy you would have answer one of my letters I wrote last post but one to have my velvet coat sent up if it be not sent, you need not send it. Pray tell Sam. to get himself ready to set out on Sunday with ye bay mare for London. I have sent him a guinea p Mr. Tagg (to carry him up); he will be at Chester on Saturday night.

“Pray give ye above written to Mr. Geo. Mainwaring my service attends Mrs. Potter & hope yr delay in writing was only to send me word you had a lad; I shall conclude now with wishing you ye complements of ye season, viz., a merry Christmas and happy New Year Service to all friends, and accept ye same from

“Yr hum. Servt.,

“Decr. 14th, 1731.”

“E. ACTON.”†

† Most of the parties named in this letter are to be traced in our local records. Peter Potter was a bookseller, and sheriff of Chester in 1735. Mr. Acton, the writer, was a son of John Acton, Esq., of Gloverstone, Chester, and brother-in-law of the George Mainwaring to whom he refers in the letter: this George Mainwaring was second son of Alderman James Mainwaring of Chester, founder of the family of Mainwaring of Bromborough in the this county, of Oteley Park, Salop, and Galltfaenan, Denbighshire. Mr. Tagg was chapter clerk of Chester Cathedral.

country should be preserved, whenever it be possible to do so, affording as they do, so many landmarks of History. It was well remarked by the Bishop of Oxford* that "everything that tended to make us live out of the mere present, and to carry us back to the past, had a tendency also to carry us on to the future;" and, silent though they be, what ought to act as better monitors to us, in pointing out the mutability and perishability of all human efforts, than these remains of antiquity!

Archæology is not the handmaid of history, but the twin-sister; and those who study her aright, may go hand in hand with the student of Natural History and Geology, and, in the words of our great dramatist, find

Tongues in trees, books in the running brooks,
Sermons in stones, and good in everything.

* At the Warwick Congress of the Archaeological Institute, in July, 1864.

NOTE.—At p. 76 there is a short description of a Roman channel drain exhumed in March, 1858, in Mill-lane, on the west side of, and opening into Bridge-street. Through the kindness of Mr. Edwards (of the firm of Kelly and Edwards, architects, of this city) the following account of all the remains of the Roman period found at the same time is now given:—

Along the south side of Mill-lane, and along the boundary of the present street, was found the channel drain already alluded to, bedded on a thick layer of concrete, beneath which was a thicker bed of clay. It was 55 ft. in length, and commenced about 50 ft. from Bridge-street. Adjoining it was a line of unchannelled flags of similar dimensions. Resting in their original positions on these latter, were three sandstone bases of columns, each 12 ft. apart. The first was similar to the Attic model, was well cut, its diameter being 2 ft. 2 in., and its height 2 ft. The second and third were very rude in character, had square bases, and the diameter of their shafts was only 1 ft. 6 in. Distant about 2 ft. 6 in. from the flags, and between the first and second bases, were two irregular excavations in the solid rock; one was of circular form, and contained some burnt animal bones; the second was an irregular square, chamfered at the corners, and having opposite each corner a small and rude excavation. What purpose these excavations may have originally served can now only be guessed at. The square one may perhaps have been the base of a forge or of a strong bench. The columns probably formed a small portico to a series of open shops. These remains are very interesting as pointing out the fact that the present street occupies the exact site of the Roman one; and afford us another stand point, in comparing the Roman with the modern level of this and of the main street.
