XVI.—*Further Notes upon Excavations at Silchester.* By F. G. HILTON PRICE, F.S.A.

Read February 11, 1886.

SOME years have now elapsed since any paper has been read before this Society upon Silchester, which is without doubt the most interesting Roman city in this country. Comparatively speaking, very little has been done there since the death of the Rev. James Gerald Joyce, F.S.A., the rector of Stratfieldsaye, whose elaborate and valuable papers upon Silchester, amply illustrated with plans and drawings, published in vols. xl. and xlvi. of *Archaeologia*, are well known to you all. Had it not been for him we should probably have remained in ignorance of the existence of the city, as it was he who inspired the late Duke of Wellington with such a keen interest in the place that he authorised excavations to be undertaken.

Between the dates of Mr. Joyce reading his last paper here in June, 1873, and his lamented death in June, 1878, several excavations have been carried out, but have not been described. The Rev. H. G. Monro, the present rector of Stratfieldsaye, being naturally very much interested in the work, carried on the supervision for the Duke of Wellington, and completed some excavations that had been commenced by Mr. Joyce, notably of the baths, and the block of buildings to the west of them, which he called the "cavalry barracks," and some others that have since been covered up.

Shortly after this I visited Silchester, and was very much struck by the magnificent remains then recently excavated near the south gate. Ascertaining that no plans had been made of them, permission was obtained from the late Duke of Wellington to draw them; accordingly in the autumn of 1881 Mr. Henry Hodge was instructed by me to make the necessary and accurate plans and drawings, which are shown in the accompanying plates; they appear to reveal the foundations of an important series of baths, which shall be presently described.

In 1884 Mr. Hodge again visited the city and recorded the more recent discoveries which will be also explained.

A short distance south of the Forum, upon the *via principalis*, Mr. Monro subsequently made another excavation of considerable interest, but, finding the distance from Stratfieldsaye too great to be constantly in attendance to watch the old men at the excavations, at his suggestion the late Duke of Wellington asked the Rev. Thomas Langshaw, M.A., rector of Silchester, a careful archaeologist, to supervise the work for him, which he has since done with much zeal, and has completed the clearing out of the foundations of this building, which will be described under the head of Block VII.

Mr. Langshaw then excavated portions of a building near the temple, which exhibited very curious construction: a plan was made, but it is incomplete, as the excavation was stopped, and all filled in before it was finished; it will therefore be as well to delay the description of it until such a time as the ground can be again removed.

These plans have been lying for many months to await a favourable opportunity of bringing them before this Society, with a view not only of placing upon record the new excavations, but of endeavouring to revive the dormant interest for the grand old city of Calleva Atrebatum.

Early in the year 1884, the late Mr. James Fergusson, Mr. W. H. Hall, of Six Mile Bottom, and myself, all greatly interested in the welfare of the old city, conferred together as to what had better be done for its preservation, and we decided that we should first of all see the late Duke of Wellington, and ascertain his grace's views, and to what extent he would be willing to go. We accordingly went to see him, which appeared to revive his former interest in the place, as he granted me permission to have further plans made, and undertook to employ some extra labour to supplement the two old men who, as he said, scrape the ground, and who were the remains of four, the other two having become effete; he further said he wished Mr. Langshaw, who lived upon the site, to conduct all the excavations, and if we could undertake to supervise him and assist him when necessary with a few hints he would be obliged. This was agreed to, and the next day his grace called upon Mr. Langshaw, and told him of our conversation, brought him copies of Mr. Joyce's journals made by Mr. Monro, and beautifully illustrated by Miss Monro, and promised that he should have a cabinet of coins to show to the visitors who came to see the remains; this was all carried out and things looked favourable for the future, when his lamented death put a stop to all further work.

Application has since been made to the present Duke to have these favours continued, but he hesitates to sanction any further excavations at present.

We proposed that, with permission of the tenant who leases the land, exca-

vations should be made in certain spots upon the sides of the roads or elsewhere, paying him compensation for the land so taken out of cultivation, then to map and describe the building or buildings uncovered; should it prove to be of insufficient importance to retain open, to fill it up and excavate another, and so on, until the whole or greater part of the city should be placed upon the Ordnance map, which Mr. Hodge has enlarged seven times for the purpose, and which would become a permanent record of the work done. This plan, which is now exhibited, has all the excavations up to date marked upon it of sufficiently large a scale to enable you to see every chamber in the various buildings distinctly.^a It is reproduced by photo-lithography on Plate XV.

In addition to the excavations made since Mr. Joyce's death, of which plans are now before you, a large block of buildings was discovered close to the south gate by Mr. Joyce himself, which he called "cavalry barracks," and which have long since been covered up. They have never been described, but Mr. Langshaw has kindly favoured me with a plan of the eastern portion, which he made before the excavation was filled in, and which is now placed upon the large map.

Before describing to you the recent excavations, it will be useful to give a short account of the site.

Calleva Atrebatum was the Roman name of Silchester, which the Britons called "*Caer Segonte*;" the present walls are of great strength, and probably occupy the site of the ancient British earthworks. In some places, more especially near the south gate, the wall is about 21 feet in height, and in others from 10 feet to 15 feet high, and about the same in thickness; the masonry is composed of rough flints, blocks of greensand, and oolite, bound together with mortar; and at intervals of about 2 feet 6 inches bonding courses of stone occur, and in some places these stones are laid in herring-bone pattern. The wall is supported with buttresses from the inside, and was surrounded by a wide and deep fosse, which may have been at times filled with water. Trees of great growth root themselves into the top and sides of the wall and adjacent *débris*, forming a continuous and sombre, forestal-like belt, completely enclosing the dormant city. The total circumference of the walls is nearly one mile and a half, and the area within comprises 100 acres.

There were five entrances, or gates; four being on the north, south, east,

^a The Ordnance map of 25 inches, 344 parts, to a mile, enlarged seven times, gives 14 feet 9 inches to a mile. For rough measurements with an inch rule, $3\frac{3}{8}$ inches slack = 100 feet, and 1 inch = 29 feet 4 inches.

and west sides of the city, which were the exits on the principal roads, and a fifth a little to the north of the east gate, apparently leading to the amphitheatre. The road from the north to the south gate is 2410 feet in length, leading on the south to *Venta Belgarum* (Winchester) and to *Sarum*. The road from *Londinium* and *Pontes* (Staines) entered the city on the east side, leading out at the west gate to *Aquae Solis* (Bath), and to *Corinium* (Cirencester) by *Spinae* (Speen near Newbury).

The east gate was 28 feet 6 inches wide in the clear, and set in a curtain recessed back from the main wall, the rounded inward sweep forming two flanking towers; and connected with these were two guard-rooms on each side. These important discoveries were made during Mr. Joyce's investigation. The small gate, likewise on the east side, leading to the amphitheatre, was called by him the *Porta Orientalis Circensis*. The south gate is, however, the most perfect; it is 22 feet 6 inches wide at the entrance, and the passage is 28 feet in length. Two roads converged to enter here; the one from *Sarum* and the other from Winchester.

Outside the walls, on the north and south, are some considerable intrenchments, probably of British date.

A modern road traverses the area. It enters the city at the farm a little to the south of the east gate, and leads out a little to the north of the west gate, dividing it into two unequal parts.

There were several minor streets, leading off from the principal ones, which can be easily traced in dry seasons, when the corn is ripe.

The first excavation, that of the villa of 1833, was made in the south-eastern corner, not far from the wall mentioned in *Archaeologia*.^a

The sites of all subsequent excavations Mr. Joyce described under the term "blocks," which designation should be adhered to.

Block I. was at the angle of two minor streets on the north-east side of the city; it consisted of a house, with a corridor 60 feet long by 9 feet wide, and seven chambers, paved for the most part with *tesserae*.^b

Block II., a much more important excavation, was on the east of the *via principalis*, at an angle of the road. It is about 355 feet north of the Forum; and contained upwards of forty-five rooms, one having a good tessellated floor—which was removed to Stratfieldsaye, where it is now laid down—and some unusual forms of hypocausts.

Block III. was another house, on the east side of the main street, upon the

^a Vol. XL. page 404.

^b *Ibid.*

opposite corner to Block II. in the street running at right angles east and west : it was a most interesting building. A full account of it will be found in *Archæologia*, vol. XL.

Block IV. was a smaller excavation, on the west side of the main road, north and south, and quite insignificant.^a

Block V. This is the most interesting feature in the whole work. Here, in nearly the centre of the area, we have a forum and basilica ; the forum is of the Greek type, nearly square, surrounded upon its three exterior sides by a double ambulatory, the fourth side being occupied by the walls of the basilica. The forum represents a rectangle ; the longer side, east and west, measures 313 feet, and the shorter side, north and south, measures 276 feet. The ambulatories were probably covered by roofs. There were three entrances from outside ; that on the south was on the forum side ; the north entrance was common to both forum and basilica ; the principal entry was on the east. The quadrangle, or market-place, in the centre, is 131 feet by 144 feet. There were seventeen rooms or shops round the forum, which have been described by Mr. Joyce in *Archæologia*, vol. XLVI. The basilica on the west side of this block is 60 feet wide by 268 feet long ; at each end it terminates in an apse. Many objects of interest were discovered here, notably that unique specimen of a Roman eagle in bronze,^b found in what was supposed to be the *aerarium* or treasury, the most southern chamber. Another eagle, of steel, also found in Silchester, was exhibited to the Society of Antiquaries by the Bishop of Carlisle in 1788.^c

Block VI. was at the angle of a road east of the forum, of which we know little.

Block VII. was south of the forum, upon the side of the street, leading southwards ; upon the opposite side of which was another excavation, undescribed.

South of this, again, was a temple, which the late Mr. James Fergusson considered to have been a *serapeum*, it being of polygonal structure, having sixteen sides to both the inner and the outer lines of wall, with an ambulatory round it. In all probability this was an open building, as no remains of roofing slabs have been discovered. The quoins or angles of these walls are built with stone, the remainder of flints. The extreme diameter is 64 feet 6 inches, and the inside area 35 feet 2 inches in diameter ; the thickness of the walls 2 feet 8 inches. The ambulatory is 9 feet 4 inches wide. The height of the walling visible is about 2 feet.

^a See *Archæologia*, vol. XLVI. Plate xvii.

^b *Ibid.* vol. XLVI

^c *Ibid.* vol. IX. p. 370.

There is no trace of columns, altar, statue, or inscription, or any other indication of the god or goddess to whom it was dedicated; but, taking into consideration its circular form, it may be open to supposition that the goddess Vesta might have been worshipped there, and that the adjacent building was the house of the Vestals. It may have contained sixteen figures of divinities at the various angles.

The excavation of Block VII. was commenced by the Rev. H. G. Monro and completed by the Rev. T. Langshaw, rector of Silchester. It is situated 228 feet 6 inches south of the Forum, and has a frontage of 62 feet 1 inch upon the east side of the *via principalis*, which traverses the city from the north to the south gate. This building is 111 feet 3 inches long from east to west, with a width of 35 feet. The additional excavation on the south, which can hardly be considered to belong to this building, marked L on the plan (Plate XVI.), is 28 feet by 23 feet, and the corridor on the north side, marked M on the plan, is 52 feet by 14 feet.

There are eight principal chambers and a corridor running eastwards to the large room at the end. It is probable that one of those marked G H may have been two separate rooms, as there is evidence of the footing of a wall that crossed it; but whether this was so divided when the house was demolished one can hardly say, but in all likelihood it was the wall of the previous building, or of the same one having been altered, of which we have other evidence. For matters of convenience, we have given letters to the chambers, by which we shall subsequently describe them.

A. This appears to be the chief entrance to the building from the street, opening on the west, the pavement of which is about two feet below the present surface of the ground. The exterior wall is here wholly absent, with but slight indications of the footings. This vestibule, if so we may term it, is 19 feet 5 inches in width, with frontage on the street; at the southern end of this it extends eastwards to a wall, about 10 feet from the line of the street; this wall is 11 feet in length north-east and south-west, and, unlike the other walls of this building, it slopes at a considerable angle. The northern end of this vestibule opens out into a long corridor, B, 84 feet long, which extends to the large room marked I on the plan. This corridor varies in width from 9 feet 2 inches to 9 feet 4 inches. Near the pavement of red *tesserae* which crosses this corridor is a slight indication of a cross-wall, or the footing of one. On the west end of this corridor the ground appears to have been more disturbed or removed. The south wall is here 2 feet 3 inches high, with three courses of flints on both sides, and concrete below; the lowest course and concrete being set out to 2 feet 3 inches, while the upper courses are only 1 foot 9 inches thick.

SILCHESTER.—PLAN OF A BUILDING BETWEEN THE FORUM AND THE TEMPLE. (BLOCK VII).

C. This chamber, which may probably have been a shop opening on the street, is 20 feet wide north and south by 15 feet 8 inches east and west, inside measurements. At the north-west angle there is 8 feet 6 inches of wall remaining, 2 feet 3 inches in breadth, by about 2 feet in height. The remaining portion of the wall facing the street is gone, only the footing remaining. The north wall of this chamber varies in width from 1 foot 9 inches on the west, to 2 feet 8 inches in the middle, and 2 feet 7 inches on the east. The eastern wall is internal, and is therefore only 1 foot 9 inches in width; the south wall is 2 feet in thickness. There is no trace of any pavement in this chamber. There are some massive stones in the wall at the north-west angle, and also where the wall is thinner, *i.e.* where it is only 1 foot 9 inches, breaking out to 2 feet 8 inches. Many of the stones in other places are exceptionally large, and are mostly of a ferruginous conglomerate, or pudding-stone, roughly axed or hammer-dressed and shaped, laid in mortar or concrete.

D. This chamber is nearly of the same dimensions as the last described, being 20 feet by 15 feet 6 inches, the width of the exterior wall on the north varies in thickness from 2 feet 9 inches to 2 feet 6 inches, and is carefully constructed of large blocks of a coarse conglomerate set in concrete; the party wall between this and the next chamber eastwards is 1 foot 10 inches in width, and is composed of three courses of flint; there is no pavement.

E. is 20 feet in length by 9 feet in width; it is paved for the most part with a salmon-coloured concrete, with a well-finished surface of broken tiles. At the south-west corner of this chamber is a red tessellated pavement, 6 feet by $6\frac{3}{4}$ feet, nearly perfect, composed of 1-inch cubes of pottery *tesserae*; this runs beneath the wall on the south, crosses the corridor B, and passes beneath the south wall of the same and onwards for a considerable distance southwards to be hereafter described (under L). The walls of this room are 2 feet 3 inches thick on the north, 2 feet on the south, (partly destroyed), 1 foot 10 inches on the west, and 1 foot 7 inches on the east; the height varies from 4 feet to 2 foot 3 inches.

F. This is a chamber of larger dimensions, being 20 feet by 17 feet 8 inches, with an opening into the corridor B, on the south-west corner, 6 feet wide; there is no trace of any pavement; the north wall is 2 feet thick, the south wall 2 feet, (partly destroyed), and the east and west walls are only 1 foot 7 inches. In this room there is a depression 1 foot deep, and the stones following the subsidence lay in a confused position. There are however several other depressions and gaps throughout the walls generally from various causes.

G. is a narrow chamber, 20 feet by 7 feet 9 inches. The wall on the east is 2 feet in width, composed of rubble and pebbles, and is merely a footing. It is possible that this chamber included H as well, and that at some remote period it was altered, and the dividing-wall removed, and that previously this wall was a portion of the large block of masonry to be seen outside the wall of this chamber on the north, running in a northerly direction, thus shewing an alteration in the ground-plan during the later Roman occupation of the building. The other walls are of the same dimensions.

H. This chamber is 20 feet by 6 feet 6 inches, with a 2 feet wall on all sides; it probably formed one room with G.

I. This is a large chamber approached from the corridor B; its dimensions are 31 feet 1 inch by 24 feet 1 inch, with an opening at the east end of the corridor 9 feet 4 inches in width. There is a slight indication of a division having obtained north and south in this chamber. The walls are solid and well constructed, but irregular, as in some places the stones are laid very uniformly, whilst in others they are quite at random; the characteristic herringbone method has been adopted, and is very observable in the lowest course of the three walls, and it may be also seen elsewhere. At the south-east angle a layer of one-inch red *tesserae* was found beneath the wall, indicating previous occupation; the wall on the north and east is 2 feet 1 inch in width and 1 foot 11 inches on the south. Outside the east wall of this chamber is another wall running parallel with it, which no doubt belongs to some other building, or perhaps it is a boundary. The walls on the south side of the corridor are composed of flints.

K. This chamber was probably a shop, with a frontage to the street, 15 feet 1 inch by 17 feet 3 inches, with a massive pier of masonry on the north-west angle. Part of the wall slightly projects over the roadway. The wall is wanting on the west side, south of the pier, and also a few feet of it on the south-west. The width of the wall on the north is 2 feet; that of the south and east walls is 1 foot 10 inches.

L. This appears to have been only an open court-yard of irregular shape bounded on the east and south by a one-inch red *tesserae* pavement 7 feet 6 inches wide on the east and 29 feet in length, and 24 feet 3 inches in length east and west on the south. On the southern edge of this the *tesserae* appear to have been intentionally rounded off, so as to form a gutter. There is a portion of another corridor extending from it on the south. These paved ways appear to have been used either for passages between houses or they are the

remains of a long paved corridor of some earlier building. The corridor or passage on the north, marked M on the plan, evidently belongs to or connects some house or alley on the north with the building already described. It is composed of one-inch red *tesserae*, the pavement is 35 feet long by 8 feet broad, the wall on the east side of it is 1 foot 5 inches broad and returns. This pavement is in a fair state of preservation, but it is undulating, and in one place there is a circular depression about 7 feet in diameter and 1 foot deep, partially filled with a mass of red concrete. The paving follows the depression evenly and free from disturbance, almost as though the sinking was intentional and so constructed. It is, however, contrary to reason that a basin should have been made in a passage, therefore one would almost suppose that before this corridor was paved a well had been sunk here, and that it had subsequently slightly subsided; or, it might even have been caused by the agency of the earth-worms, continually at work bringing up fine earth from beneath the floor and casting it on the surface, which would cause the level of the *tesserae* to subside in the centre. Darwin^a instances several cases of similar subsidence at Silchester, the observations having been carefully carried out by his sons and the late Mr. Joyce. On page 214 he gives a figure of a section of a floor measuring north and south 7 feet 9 inches wide; the *tesserae* were laid up to a wall on either side; the surface of the field sloped from north to south at an angle of $3^{\circ} 40'$. The pavement, which was nearly level along lines parallel to the side-walls, had sunk in the middle as much as $7\frac{3}{4}$ inches; from such a fact as this and others accurately made by this great observer, we may therefore readily imagine the subsidence in this instance to have been caused by the earth-worms.

Block VIII. (Plate XV.) was a building with three sides, and with an open quadrangle; it is situated a little to the east of the south gate, and is connected by a wall with the south wall of the baths, which I shall presently describe as Block IX. The buildings of Block VIII. were of considerable extent; their excavation was commenced in 1875 by the late Mr. Joyce, who called them "cavalry barracks," because part of the building was paved with very rough, and great heavy flints, such as might have been required for stables. The greater portion of it was covered in about 1880, and has never been described. I am greatly indebted to Mr. Langshaw for kindly furnishing me with measurements and materials of the most southern portion. This he styles "Building B," and considers it to be separate from the northern part, which he calls "Building A." The plan

^a *Vegetable mould and earthworms.*

of B, appears to consist of fourteen chambers, with an entrance on the north-east corner. Its length is about 128 feet by 40 feet at the entrance, and 35 feet in the other part. The outside wall on the south was about 2 feet in thickness; that on the east side was 3 feet 3 inches, composed of flints. The measurements of the various chambers are as follows: A, the large one on the south-east, 24 feet by 18 feet; B, 7 feet by 18 feet; C, 11 feet by 18 feet; D and E, 7 feet by 9 feet each; F, 17 feet by 18 feet; G, 13 feet by 18 feet; H, 19 feet by 18 feet; I and J, 7 feet by 13 feet each; K, 24 feet by 11 feet; L and M no doubt were the porters' lodges, and measure 9 feet by 3 feet 6 inches each; N, the doorway, is 6 feet in width; the corridor, O, is 70 feet by 11 feet. In the latter chamber an abundance of oyster shells was discovered. Should excavations be ever sanctioned again, it would be of extreme interest to re-open this block, and have the remaining portion placed upon the large plan. Mr. Langshaw tells me there were other buildings to the north of it; attached to one was a fine hypocaust.

The space between this last described building and the baths, apparently, was a garden, or open court-yard, as nothing was found there when excavations were made. It is about 170 feet in length by from 60 to 80 feet in width.

The court and buildings seem to have been enclosed by a boundary wall, running from the north end of the Baths, and turning with a rounded corner away to the west.

Block IX.—The Baths. This excavation was commenced by the late Mr. Joyce and completed by the Rev. H. G. Monro: they are probably the baths which were first discovered in 1833, and then covered in, as the following accounts tend to prove. A short account of the 1833 Baths, by the Rev. John Coles, appeared in *Archaeologia*.^a

There is another account in the *Gentleman's Magazine* for Feb. 1833, by Mr. Kempe, giving an interesting description of these baths.^b

A careful investigation has been made respecting the site of the baths which

^a Vol. xxvii. p. 418.

^b "Some labourers employed in cutting a drain in the nine-acre field, within the walls of Silchester, and about 200 yards to the south-westward of the church, struck upon some foundations of Roman buildings. The Rev. John Coles being informed of the circumstance, obtained permission of Mr. Burton the farmer to prosecute the discovery, which he liberally did at his own expense.

In a short time the foundations of a large building, upwards of 80 feet in length, probably the

were exposed in 1833 by Mr. Coles, in consequence of a doubt as to the accuracy of records made about that time by Mr. Kempe and Mr. MacLaughlan in reference to the site of that building.^a

The similarity between the 1833 remains and those now illustrated led to the belief they were identical.

It appears that the Rev. J. Coles, in 1833, excavated a portion of the baths, of which he prepared a plan. This was lithographed at the time, but a copy of it cannot now be discovered. Under the pressure of the farmer the remains and excavations were abruptly filled in.

The Rev. H. G. Monro again excavated and completed the investigation

Thermae or public hot-baths of the city, were revealed. The annexed lines will show the general disposition of the rooms of this edifice.

Nos. 1, 2, 3, were apartments, the dimensions of which I derive from a neat lithographic plan presented to me by Mr. Coles, and from the information of John Bruce, Esq. F.S.A. No. 1, 11 feet 8 inches by 25 feet. No. 2, 12 feet 9 inches by 25 feet. No. 3, 19 feet by 25 feet. These were hypocausts, or sudatory apartments, the floors of which stood upon numerous round and square pillars of Roman brick, each about 3 feet 4 inches in height. The walls were 3 feet thick. The easternmost chamber is No. 1; the floor of this room had been supported by seven ranges of pillars, seven in a row; the three first rows from the east were circular, the remainder square. The diameter of the pillars 9 inches; they stood on a plinth formed of a single tile of larger dimensions. The apertures 6 and 7 afforded a brisk draught to the praefurnium or furnace, and heat was thus diffused all over the floor of the sweating rooms, and to the general volume of air by flue-tiles placed as pipes, perforated with holes, in ranges against the walls. The floor was composed of large square tiles, on which, in a bed of cement, was probably laid a tessellated pavement. 5 was undoubtedly the natatio or water-bath; here, at figure 8, was a leaden pipe inserted in a tile, having a triangular aperture, through which the element was supplied. 4 was probably the apodyterium or frigidarium, the anti-room, where the bathers undressed, as 3 was the media cella, or tepidarium, where they were shampooed (to adopt a term in modern use) by the strigils of the *aliptae* or *unctores*. The anti-room was paved with large square tiles, surrounded by a border of tesserae, each an inch square. A quantity of fractured window glass, full of air bubbles, and having a coarse surface, somewhat resembling the graining of wood, was found on the spot. Such a substance must have been peculiarly necessary in the sudatories, as light would be transmitted, while the cold external air was excluded."—*Gent. Mag.* ciii. 124, 125.

^a Mr. A. J. Kempe's Map, etc. *Archaeologia*, vol. xxvii. p. 419, Plate xxxii. Appendix. Mr. MacLaughlan, *Archaeological Journal*, vol. viii.

which had previously been so very imperfectly performed, although that which had been done appears to have been carefully recorded and described at the time.

In a communication to *The Reading Mercury*, Feb. 11, 1833, the Rev. John Coles announced his discovery, and in the same journal, Feb. 18, 1833, a correspondent (S. H.) furnishes a descriptive article upon Silchester. The following extracts are important :

“To the indefatigable ardour of the Rev. Mr. Coles, the respected rector of the parish, aided by the exertions of another neighbouring clergyman, we are indebted for some recent curious discoveries. Within and as near as may be to the south-east part of the octagonal wall, which is distant less than a quarter of a mile from the Amphitheatre, excavations have been made, which lay open the base of structures, calculated to form matter of pleasing investigation for the antiquary, and which present the following appearances :—

At the eastern end is a vault (or *camera*) of a hot bath, in which now stand about fifty pillars, some round and some square, composed of thick paying-tiles, seven inches in diameter, which it is conjectured supported the plaster floor of the *sudatorium* above. The remains of flues and a large accumulation of charcoal and ashes evidently show that here the heated air was generated which filled the *sudatorium*. The size of this vault is 24 feet by $12\frac{1}{2}$ feet, and there is another west of it, divided by a brick wall, of similar size and appearance. Beyond that is another vault with a strong separation of wall between, near 5 feet high, whose dimensions are about 24 feet by 20 feet, and in this the bases only of pillars are visible.

Adjoining to this is a bath, not ornamental but in a most perfect state; it measures 12 feet by 8 feet, has a floor of large earthen pavement, and its sides are encrusted by an adamantine cement. The way in which it was supplied with water is still visible, by means of a lead pipe formed of very drossy metal or else in a state of great corrosion.

Above and just beyond the bath is a large apartment, supposed to be the portico or vestibule, in which some portions of a tessellated pavement still remain, and a moulded skirting composed of cement. Many relics were gathered including (in the bath) a human skeleton, and in the leaden pipe connected with the same upwards of 200 Roman brass coins.”

Upon comparison it will be observed how similar these apartments are to the southern rooms shown in our illustration, and in several matters of detail which are now absent, these contemporaneous descriptions of earlier excavations are extremely valuable and interesting.

SILCHESTER.—PLAN OF THE BATHS. (BLOCK IX).

Sam Hooper
back
Sept 1887

In a communication Mr. Monro says: "The baths of 1833 are the last excavated portion which has been dug out since Mr. Joyce's death." This statement corroborates the identity of the two excavations.

Therefore we may conclude that Mr. A. J. Kempe was somehow mistaken in the situation of the baths of 1833, as being near the modern road and the church.

The Rev. J. Coles, about the same time, opened three or four places, all close together. Marked upon the published plans of the city contiguous to these baths will be observed "Site of Roman Villa." This was probably another of these excavations, and the baths and villa are well remembered by old inhabitants.

The plans made in the autumn of 1881 by Mr. Henry Hodge are reproduced on Plates XVII., XVIII., and XIX.

This excavation, which is in the nine-acre field, appears to indicate the foundations of an important series of baths. They extend about 114 feet from east to west and 94 feet from north to south. The general structure of the walls shows for the most part regular bedded, coursed masonry, not random work, and occasionally one observes instances where alterations or reparations have been made. The south main wall, which varies from 2 feet 6 inches in width at the western end to 2 feet 7 inches on the east, is built of four courses of flint and stone and two courses of bricks, then five courses of flint and stone and one course of bricks (or occasionally two courses), then three courses of flint and stone and two courses of bricks; this observation was made in the wall close to the flue tile hypocaust in No. 8 where it is 5 feet 6 inches in height. The mortar is of brown colour, and the bricks, which are of the usual size of Roman bricks, are laid in reddish mortar.

The stones are mostly hammer-dressed and roughly squared; they consist of grey grits, oolites, and now and then marble and even blocks of chalk. In the western and north-western portions of the buildings flint mainly predominates. Large portions of the division-walls eastwards are built of bricks, which are well tied in and returned on the main walls by brickwork. The quoins and angles are generally of brick.

There are sixteen chambers, and for convenience they shall be numbered. (See Plate XVII.) We will commence with that at the north end, which shall be called No. 1; the walls on the north-east and west are 2 feet 1 inch thick; as No. 2 is of the same dimensions the two shall be dealt with together. They are evidently hypocausts, and measure 13 feet 9 inches in length by 9 feet 3 inches in breadth; they each terminate in a semi-elliptic apse towards the east. In the apse of No. 1

was a 3-inch leaden pipe, which passed through the wall at the level of the ancient floor; the ends showed a rough fracture. This has been placed in the museum for better security. The *præfurnium* existed at the north end, the entrance to the hypocaust was in the centre of the wall, the passage being 5 feet in length and 1 foot 8 inches in width.

The boundary wall near this point is surmounted by a course of bricks, embedded in thick white mortar about 2 inches in thickness. The bricks measure $17\frac{1}{4}$ inches and $11\frac{1}{2}$ inches by $1\frac{7}{8}$ inch.

In chamber No. 1 were 27 *pilæ* of square tiles 8 inches by 8 inches on plinths 12 inches by 12 inches; they are built with half-joints of red mortar. No. 2 contained only 20 *pilæ* of tiles, but in both cases some few had been destroyed in excavating. The two chambers communicated by means of three air-passages cut in the wall. There was evidence when first discovered of one of these passages having been arched over, but that was entirely obliterated when last I visited the remains.

No. 3 is a chamber measuring 12 feet 6 inches on the west side by 11 feet 10 inches on the east, and 13 feet 9 inches across. At the west end is an opening, evidently a doorway leading into the long corridor No. 5. There is an aperture in the wall on the east side, and two on the west side, both at the north end of the chamber, probably intended for drainage.

No. 4 is a solidly-constructed chamber projecting two-thirds of its width beyond the main western wall. The outside walls are 3 feet 4 inches in thickness; the inside measurement is 6 feet from east to west by 5 feet from north to south; the depth is 2 feet 9 inches. It is lined with regular courses of brick, and there are no remains of wall plastering. It is paved with large bricks. From the fact of a chamber of such small size being so substantially built, it appears to indicate a superstructure of great weight, or one requiring extra protection.

No. 5. This chamber, perhaps the *apodyterium*, is 52 feet 2 inches in length by 17 feet 8 inches in breadth; it is upon the same level as No. 3, whereas all the remaining parts of the excavations are some feet below. This chamber is paved with loose red brick *tesserae*, with some slight indication of pattern for 25 feet on the north side of it; the remainder consists of eleven bands of rammed tile, with uncertain intervals of fragments of tile near the surface. The difference in level we thought might be accounted for by the presence of hypocausts beneath, but, finding a hole made by vermin, it was tested by Mr. Hodge early in August 1884, who made a section in the floor of room 7, which is upon this same level, and he found the floor to be composed as follows:—4 inches thickness of flints in

SILCHESTER.—BIRD'S EYE VIEW OF THE BATHS. (BLOCK IX).

black muddy wet soil, then 2 inches or so of fragments of $1\frac{1}{2}$ inch broken tiles. On this foundation was a stratum of red concrete 11 inches thick, not compact. On the top was a stratum of 9 inches of very perfect salmon-tinted concrete graduated from coarse to fine, which latter was $1\frac{1}{2}$ inch thick. The whole measured 2 feet 2 inches in thickness, or with the pavement about 2 feet 3 inches.

The external wall at the north is almost entirely composed of flints; at the south end there are large brick blocks and a double course of thin tiles. This may be accounted for by difference in period or object of construction.

At the north-east corner of this chamber is a deep cutting, perhaps we may call it a *cloaca*, $7\frac{1}{2}$ feet deep, which extends southwards for 14 feet 4 inches; the lower part up to the second set-off is built of bricks, the upper being flints. This *cloaca* emptied itself outside the building on the east side through a passage 1 foot 2 inches wide into an open court situated between the walls of No. 6 and No. 15. Even now the ground is very swampy at this spot. In company with Mr. Langshaw we dug in it a year or two ago to ascertain the course of this drain, and we then discovered it about 2 feet beneath the surface; it was paved with 8-inch square tiles in two thicknesses, and passed under the floor of No. 16. Above it, in that chamber, oak beams were laid. There are four exits from the long chamber No. 5; one on the east side, leading into No. 7, the entrance being in the centre of the wall of that chamber, which has had a tessellated door; the next exit was also on the east side, leading into No. 8, but the wall is here destroyed, so very little now remains of it; the third exit was on the west side, nearly opposite the latter, and leads into an ambulatory, which appears to connect these baths with the buildings of Block VIII.; the fourth leads into No. 3 on the north.

No. 6 is a chamber 14 feet 6 inches north and south by 12 feet 9 inches; its walls all differ in thickness, that of the north and south is 2 feet 1 inch, the west wall is 2 feet 6 inches, and that of the east wall is 2 feet 8 inches. The floor is composed of loose red brick *tesserae*, with some indications of a pattern; there is an opening in the south-west corner 3 feet in width.

No. 7. This chamber is 12 feet 11 inches by 12 feet 9 inches. On the east, at 1 foot 6 inches from the angle of the north-east wall, is an opening 3 feet 5 inches wide leading into No. 9; this doorway was paved with white *tesserae* laid on a bed of red concrete 8 inches in thickness. This chamber was paved with concrete, but no *tesserae* were visible. At 4 feet 9 inches from the north, on the west side, is an entrance into No. 5, which doorway is 4 feet wide. At the south end the wall is

of unusual thickness, *i.e.*, 4 feet 1 inch; part of it on the west side is broken away.

No. 8. This is a hypocaust of more than ordinary interest, exhibiting a series of horizontal flues composed of a layer of what are usually termed box flue tiles, measuring $17\frac{1}{2}$ inches in length by $9\frac{1}{2}$ inches in width and 6 inches high, and of $\frac{3}{4}$ inch in thickness, of red pottery, with two openings on each side 3 inches wide, and the entire internal height is $4\frac{1}{2}$ inches.

The chamber itself in which this hypocaust is contained measures 34 feet 5 inches east and west, and 15 feet 11 inches north and south; but the flue-tile hypocaust is in the western recess of it, which measures 11 feet 5 inches east and west by 8 feet 10 inches north and south. It may possibly have been quite distinct. There is only one upcast flue visible, and that appears to be somewhat of a similar pattern to the others set vertical, but it was so broken and also filled with red mortar that an exact opinion could not be formed. This arrangement was laid upon a bed of red concrete, the thickness of which is not obvious. These flue-tiles are overlaid with a solid covering about 10 inches thick of very superior concrete in three layers of strata, the lowest composed of white mortar mixed with nodules of chalk and pounded red tile, the next is salmon colour mixed with finely sifted unslaked lime, and the upper, which forms the bedding for the floor of tiles, is of red mortar with finely pulverised tile, the whole forming a very solid mass of perfect concrete.

The paving tiles are about 8 inches square and about $1\frac{1}{4}$ inch thick; on these, overlying a portion of the surface, is a layer of white mortar or stucco 5 inches in thickness, on which, in the north-west angle of the recess, are laid a few ordinary building bricks as a pavement. (See Plate XIX.)

The enclosing walls of this flue-tile hypocaust recess have been stuccoed, and there are evidences of various colours, but all is much perished, and the pattern or design is untraceable. The only other example of stucco plastering remaining is at the two doorways observable in the plate; this has been much coloured, and some of the tints are visible.

The whole depth of this chamber is 5 feet 6 inches, from the top of the south main wall, the composition of which has been already described when speaking of the walls of these buildings.

There appears to be evidence of alterations having been made in this chamber at some time or other, as the floor over the horizontal flues has, no doubt, been added, and the upcast flue-pipe been filled up with salmon-coloured concrete. It had probably been constructed in the first instance as a hot bath, and then

SILCHESTER.—VIEW SHOWING SECTION OF HYPOCAUST IN THE BATHS. (BLOCK IX, CHAMBER 8).

subsequently changed into a tepid plunge or swimming bath, which may account for the immense thickness of the floor. Over the eastern portion of the room were several *pilae* of the usual 8-inch square red tiles, upon which a floor had been suspended, heated by hot air.

No. 9. A chamber to the north of the last described, measures 14 feet 10 inches by 6 feet 11 inches. It has an opening or doorway 2 feet 9 inches in width, in the centre of the eastern wall leading into No. 10. On the south side, at a distance of 1 foot 2 inches from the west wall, is a block of brickwork 1 foot 9 inches in width, extending for 5 feet 9 inches along the wall; a similar block obtains at the north end, only it is 2 feet 5 inches in width. There are three *pilae* of red 8-inch square tiles upon the floor, all that remained of a hypocaust. There is no doubt but that the blocks of brickwork likewise formed part of it.

No. 10, the adjoining chamber on the east, is 14 feet 10 inches by 10 feet 2 inches; it likewise contained three *pilae* of tiles. Outside the east wall is a block of rough *débris*, 5 feet in width, through which a channel 2 feet wide has been cut, no doubt the passage from the *præfurnium*; there is likewise an opening on the south, leading into chamber No. 11 on the east.

No. 11. This chamber measures 27 feet 6 inches east and west, 24 feet 4 inches north and south; it is divided into four compartments, the two southern ones may even have been separate rooms, but in the absence of sufficient evidence, I include them in this one. It was heated by means of a hypocaust, as twenty *pilae* of the usual red tiles were found upon the floor. A passage on the east, 2 feet 8 inches in width, leads into a chamber at the end, which may have been the kitchen.

Upon either side of this channel are two small chambers.

That upon the north we will call No 12; it measures 6 feet 5 inches east and west by 5 feet 7 inches north and south; the thickness of the walls on the north and east are 2 feet 8 inches, and on the south by the channel only 1 foot 9 inches. It has a narrow opening into No. 11.

No. 13. This small chamber measures 6 feet 5 inches east and west by 3 feet 4 inches north and south. It has no apparent outlet; its walls are of the same thickness as the last described.

No. 14. The most easterly chamber, measures 14 feet north and south by 12 feet 6 inches east and west. Adjoining its northern wall is a singular angular projection, forming a small recess, which was probably a *latrina*.

No. 15. This is a long chamber, 49 feet in length east and west by 6 feet 11 inches north and south. The walls are composed of flints laid upon brick footings. On the north this wall is 1 foot 8 inches in width. It has in the

centre an opening 6 feet 8 inches wide; upon each side of which is a large block of stone 2 feet 1 inch square by 5 inches in thickness, with 2 inches of mortar below. This appears to have been a main entrance; it is the only one on the north side. Several attempts have been made to discover the road or street leading to this building, but without effect. It was probably approached by a long passage, connecting it with a minor street running east and west, which has not as yet been made out, but which, it is to be hoped, may yet be ascertained and placed upon the map.

No. 16. This chamber is situated at the south-east end of No. 15. It measures 15 feet 6 inches east and west by 12 feet 4 inches north and south, and was probably floored with planks of wood, as on the south end of it are two long strips of oak round-timber, beneath which, as already stated, the drain flowed. It would appear from the plan that there was another entrance on the south west, approached by an ambulatory, 60 feet long, from the building of Block VIII. which, as far as we can at present tell, may have formed a portion of the same building. It is certain that there was no entrance or exit on the south, as the wall is there quite massive.

There is reason to suppose that no other building existed between this and the city wall, but that the space formed the *pomoerium*.

I cannot conclude without thanking Mr. Langshaw for his able assistance, and for much useful information rendered during the preparation of this paper.