

through *Sussex* about 10 Years ago. The Storm was succeeded by a profound Calm, which lasted about an Hour; after which the Wind continued pretty high, till 10 o'Clock at Night.

To Sir HANS SLOANE, Bart. &c.

Honoured S I R, Rosehill, Sept. 13. 1741.

THE above-written is Part of a Letter from my Son *Stephen Fuller*, Fellow of *Trinity College* in *Cambridge*; which is so particular an Account of a terrible Storm on *Tuesday* last, in *Huntingtonshire*, in which he was present, as may deserve to be communicated to the ROYAL SOCIETY, if you think fit. I am

*Your most dutiful Son,
and humble Servant,*

J. Fuller.

XXIX. *Extract of Letters from Mr. T. Sympson, to Brown Willis, Esq; Member of the Society of Antiquaries, and to James West, Esq; Member of the Same, and Treas. R. S. by the Publisher, concerning the Remains of a ROMAN Hypocaustum or Sweating-Room, discovered under-ground at Lincoln, Anno 1739.*

MR. CHANTER having set some Labourers to dig a Cellar in an Outhouse (belonging to his Mansion) fronting the West End of the *Minster*, and ad-

adjoining to the Chequer-gate; they found Two or Three Stone Coffins, which had probably lain there ever since the Demolition of the antient Parish church of *St. Mary Magdalen*, to make way for the Foundation of the Cathedral, and its Appendages: But going lower, about 10 or 11 Feet deep, they found some Building; and at 13 Feet, to their no little Surprise, they struck into the Corner of a Vault. Mr. *Sympton* took it to be a ROMAN *Hypocaustum*: He had the Dimensions of it taken, as in the Plan; see TAB. VIII. *Fig. 1.* and the Profile, *Fig. 2.*

A. The *Præfurnium*, [Stoking-place] Entrance or Place, where the *Fornacator* [the Stoker] stood to manage the Fire. It is 3 Feet 6 Inches square, its Height not certainly known, because of the Rubbish which lay at the Bottom.

B. The *Fornax*, Furnace, or Fire-place, built of Brick, and arched over with the same. Its Length from *E* to *G*, 5 Feet 6 Inches; its Height 3 Feet at *E*, but 4 Feet at *F*, rising gradually; 3 Feet 6 Inches long from *E* to *F*, and 2 Feet wide between *E* and *F*; 2 Feet long from *F* to *G*, and but 19 Inches wide between *F* and *G*.

C. The *Alveus* [or Body of the Kiln], 21 Feet 4 Inches long; 8 Feet 4 Inches broad; and 2 Feet 4 Inches high. The Floor is made of a strong Cement composed of Lime, Sand, Brick-dust, &c. which the Masons of that Country call *Terrace-mortar*. Upon this Floor stand Four Rows of low Pillars, made of Brick, 11 in a Row; the outside Rows round, the Two inner Rows square: The round ones are about 11 Inches Diameter, the others 8 Inches square: Each standing on a Brick 11 Inches square, as at *Fig. 4.* and

2 Inches thick ; the Shaft 2 Feet high, upon which lies another Brick likewise 2 Inches thick, some 17, 18, and others 19 Inches square, as at *Fig. 3.* which represents the Profile of Two square Pillars with the square Bricks at Top and Bottom, which make the whole Height of the *Alveus* 2 Feet 4 Inches. The Pillars, both round and square, are jointed with Mortar, and that very clumsily : The round Pillars being composed of 10 Courses of semicircular Bricks, as at *Fig. 4. A*, laid by Pairs ; the Joint of every Course crossing that of the former at right Angles, as at *Fig. 4. C* ; with so much Mortar betwixt, that the Two Semicircles rather form an Oval, and so the Pillars look at first Sight as if they were wreathed : The square Pillars are composed of 13 Courses of Bricks, as at *Fig. 4. B* ; 8 Inches square, as at *Fig. 4. D* ; these Bricks being thinner than those which compose the round Pillars.

On the Top of these Pillars rests the *Testudo* or Floor of the *Sudatorium* or Sweating-Room, *Fig. 2. HI*, which is composed thus : First, there is a Floor of large Bricks, 23 Inches long, and 21 broad, which lie over the square Bricks on the Tops of the Pillars, as at *Fig. 3.* the Four Corners of each Brick reaching to the Centres of Four adjoining Pillars, as at *Fig. 5.* where only one of these larger Bricks is represented, as it bears upon Four of the smaller Bricks with their Pillars under them. On this Course of Bricks is a Covering of Cement 6 Inches thick, and upon that is set a tessellated Pavement : The *Tessellæ* of the Corner uncovered, *K*, in *Fig. 1* and 2. are of a whitish Colour.

L and *M*, in *Fig. 1* and *2*. are Two *Tubuli* or Flues, 12 Inches wide and 14 deep, for carrying off the Smoke: The Bottoms of them are even with the Bottom of the *Alveus*, and they are carried upon the Level about 15 Feet, under another Room by the Side of the *Hypocaustum*, and then it is presumed they turn upwards. The Walls of this Room were plaistered, and the Plaister painted red, blue, and other Colours, and its Floor tessellated white; no Figures discernible in either Painting or Pavement. This Pavement, which is on a Level with the *Testudo* of the *Hypocaustum*, is about 13 Feet below the present Surface of the Ground: So deep is old *Lindum* buried in its Ruins! The Workmen, in digging up this Pavement, struck into the Flue *M*, 3 Feet from the North-east Corner of the *Hypocaustum*; and opened it to the very Corner *K*, which shewed one of the round Pillars, and so the Whole was discovered. In sinking the Hole *NK*, at 5 or 6 Feet Depth, they came to the Wall, which was dug up by Pieces with the Rubbish, before they came to the Pavement. This had been the Wall of a Room under which the *Tubuli* ran, by the Side of, and not over the *Alveus*, but on the East Side of it.

Mr. *Sympton* got a Youth to creep in at the Opening made at *K*, and take the Dimensions of the several Parts, who, the *Alveus* being quite black with Smoke, returned like a Chimney-sweeper; but could not take the exact Measures of the *Fornax* and *Præfurnium*, on account of Rubbish he found in them: Wherefore, Mr. *Sympton*, being desirous to inform himself thoroughly of all the Parts of this curious Piece of Antiquity, with the Leave, and at the Expence, of the
Pro-

Proprietor, caused another Hole to be sunk 16 Feet deep, and by driving a Level *OP*; see *Fig. 1* and *2*. he broke into the Middle of the *Fornax*; and, having cleared it of Rubbish, found its Dimensions as above, and that the Bottom of the narrowest Part between *F* and *G*, was raised 18 Inches higher than the Bottom of the Part between *E* and *F*.

The *Præfurnium* was covered over at Top with a large flat Stone.

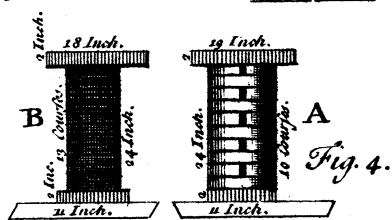
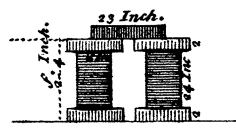
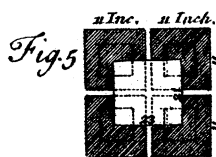
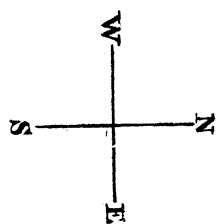
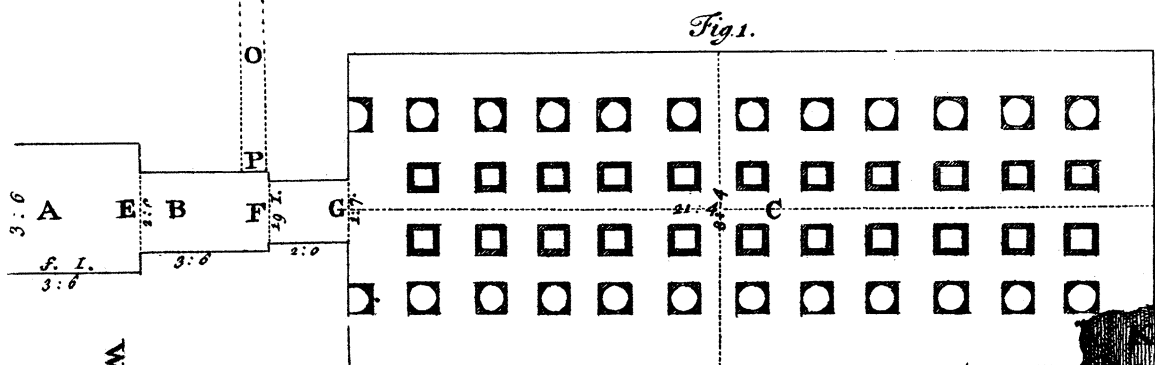
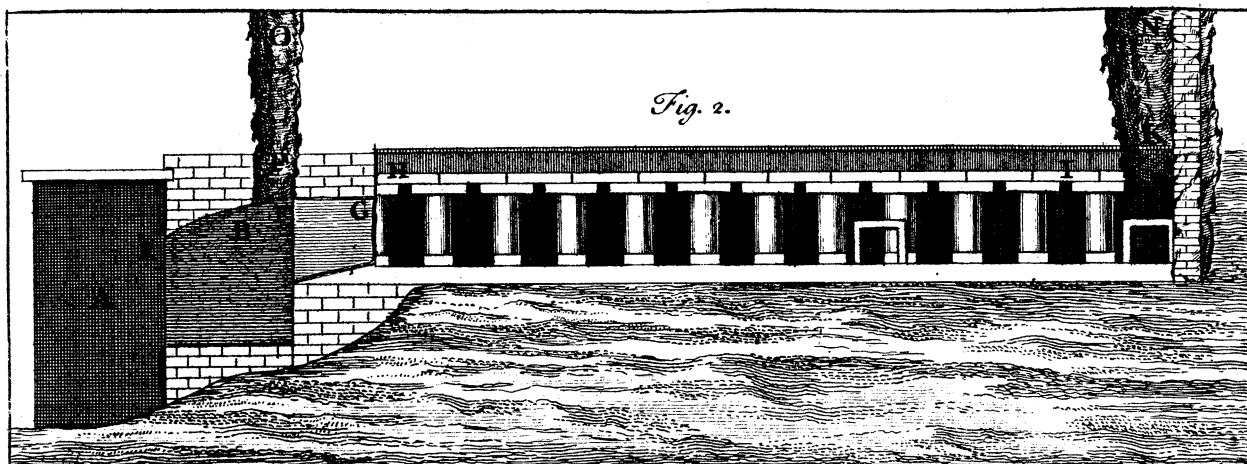
The *Fornax*, and the Two square Pillars in the *Alveus* fronting the Opening of the *Fornax*, were greatly impaired by the Fire, which must have been very violent: Some small Fragments of Wood-coal were thrown out among the Rubbish in the Bottom of the *Fornax*; whence probably it was heated with Wood.

At the Conclusion of the Account Mr. *Sympson* sent to Mr. *Willis*, he gives us the following Remark upon a Passage in the second Letter from Mr. *Baxter* to Dr. *Harwood*, concerning the *Hypocausta* of the *Antients*, printed in these *Transactions*, N^o 306.

“ Mr. *Baxter* says, the *Hypocaustis* was called *Alveus* and *Fornax*: But, with due Deference to that
 “ learned Gentleman, (says Mr. *Sympson*) I humbly
 “ apprehend them to have been distinct Parts of the
 “ Whole, which was called *Hypocaustis*: The Ground
 “ of my Conjecture is this: In the first Place, it
 “ would hardly be possible to make a Fire in that
 “ Part of this *Hypocaust*, which I call the *Alveus*;
 “ much less to come at it, to manage it, being so
 “ low, and so crowded with Pillars, as to admit only
 “ a slender Person to crawl amongst them, and that
 “ not

“ not without Difficulty. In the next Place, the
 “ Floor does not seem designed for it, nor are
 “ there any Appearances of Ashes on it: And,
 “ further, that the *Fornax* was, where I have
 “ placed it in this, appears not only from the Stru-
 “ cture of that Part, but from the Bricks being much
 “ burnt [and Pieces of Wood-coal being found in
 “ it]; whereas in the *Alvens*, the Bricks are only
 “ black with the Steam and Smoak being drawn
 “ through it by the *Tubuli*. But I submit my Opi-
 “ nion to your better Judgment.” He might have
 added, that only those Pillars in the *Alvens*, which
 faced the Mouth of the *Fornax*, had suffered much by
 the Fire, the others not.

That *Hypocaust*, described in N^o. 306. above-men-
 tioned, must have been a much hotter Room than
 this; for, instead of the Flues being carried under
 another Room, the Walls of the Sweating-room itself
 were hollow or double, and a great Number of Flues
 carried up between them all round the Room. A
 curious Model of this is still to be seen in the *Mu-
 seum* of the ROYAL SOCIETY.



A Scale of 15 feet.

C. Mortimer ad descript. delin.

- A *The Timber.*
B *The Plank.*
C *The Sheathing.*

Fig. 6.

Fig. 7.

Fig. 8.

C

Fig. 2.

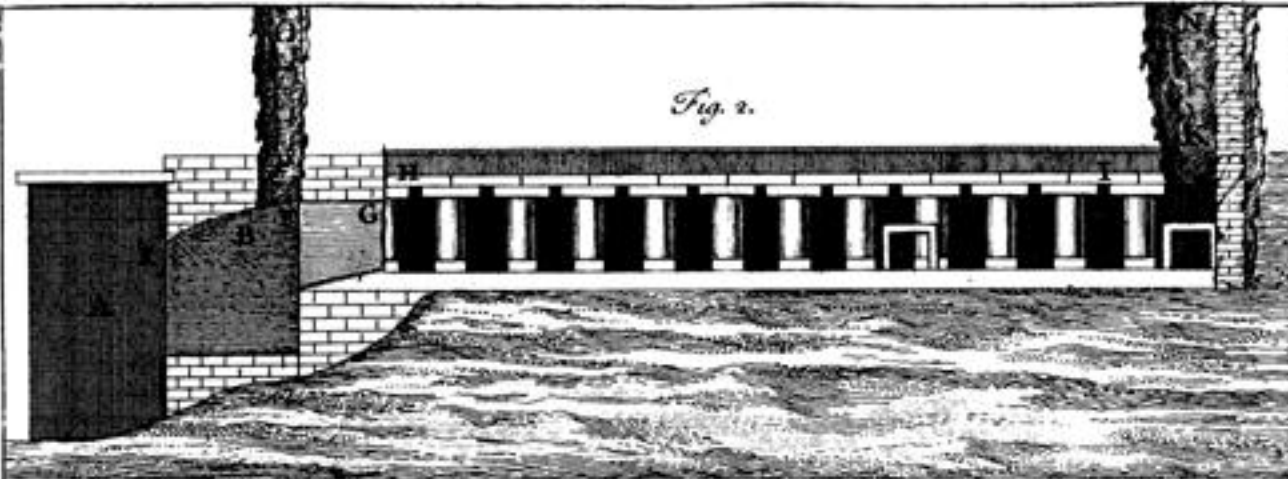


Fig. 1.

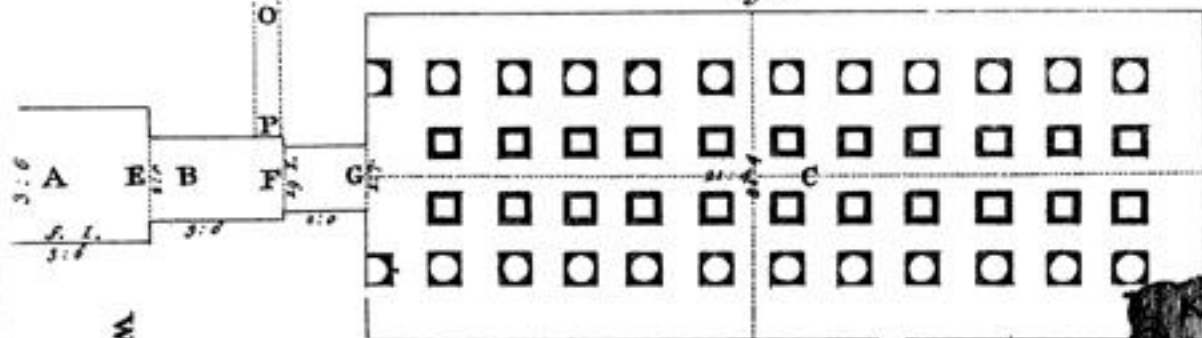


Fig. 5.

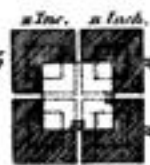


Fig. 3.

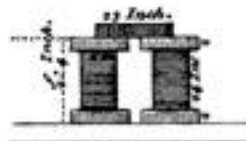
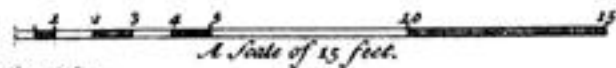
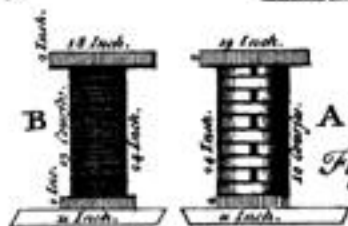


Fig. 4.



C. Mercurius ad descript. delin.



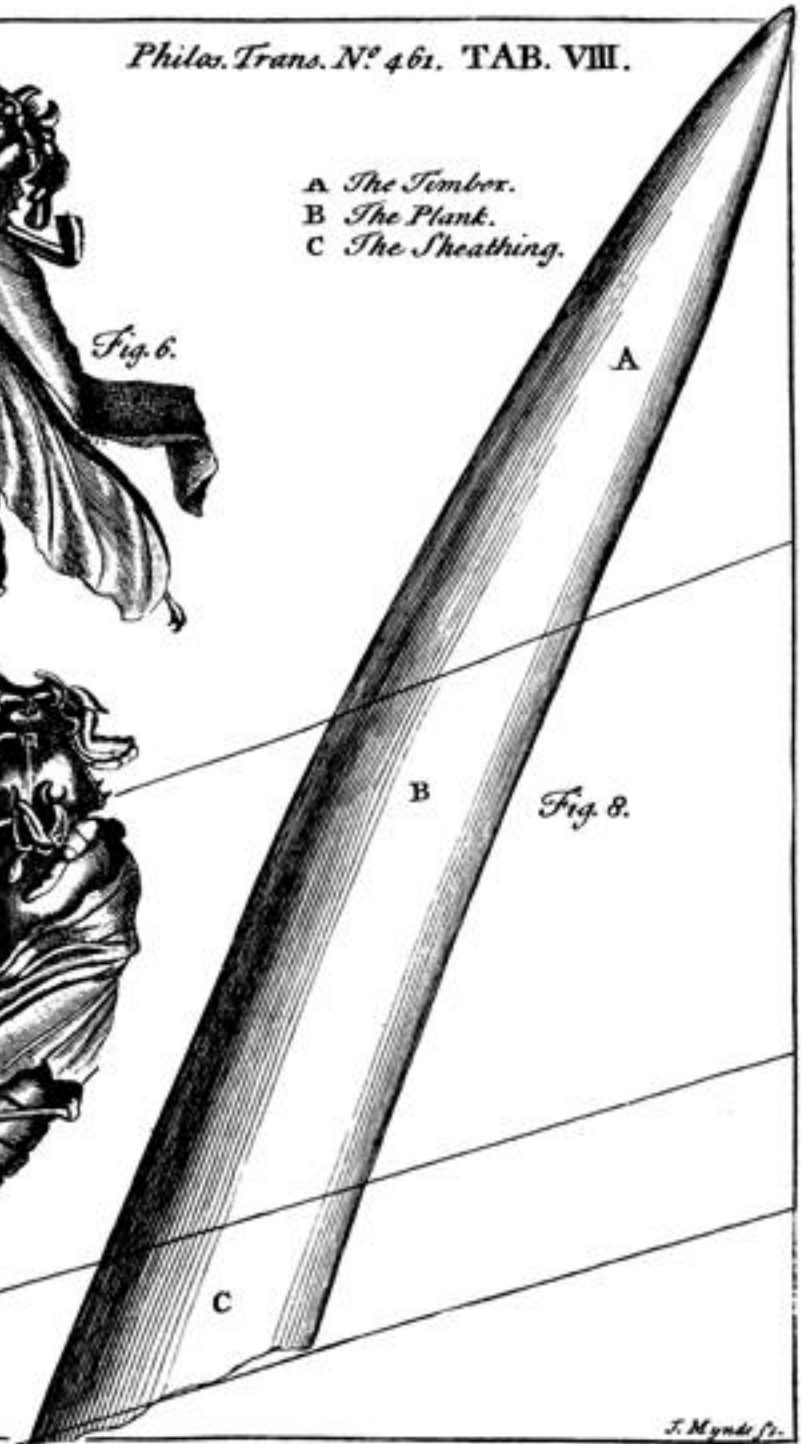
Fig. 6.



Fig. 7.

- A The Timber.
- B The Plank.
- C The Sheathing.

Fig. 8.



J. Mynde sc.