

PHILOSOPHICAL TRANSACTIONS.

December 20. 1683.

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A Letter from Dr. John Wallis, to one of the Secretaries of the Royal Society (Dr. Robert Plot, the publisher of these Transactions) concerning an Antient Mantle-tree in Northampton-shire; on which the date of it (for the year of our Lord 1133) is expressed by the Numeral Figures, which shews the great Antiquity of those Figures here in England.

S I R,

I Give you, herewith, the Draught of an Ancient Mantle-tree; which was lately shewed me, at *Helmdon* in *Northampton-shire*; at the now dwelling house of Mr. *William Richards* the present Rector or Minister

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there; (which is I suppose the Parfonage house, appertaining to the Rector of the place:) belonging to his Parlour Chimny.

That which, to me, makes it very remarkable (and which caused me to get it thus delineated,) is the date of it (expressing I suppose, the time when it was first made) described (partly) in numeral Figures, A° Doi M° 133. But both the Letters and the Figures are of an Antique form, agreeing well enough with that Age.

That the *Numeral Figures*, now in frequent use, 1, 2, 3, 4, 5, 6, 7, 8 9, 0. with the manner of computation by them (and the names of *Algorism*, appropriated to that way of computation) came to us from the *Arabs* (but somewhat altered, as to the shape of the Figures in succeeding Ages; as are also the *Latine Letters*, which were originally derived from those of the *Greek*;) and to them from the *Indians* (who are supposed to have been the first inventors of such Figures, and the way of computation by them,) is generally agreed (I think) by all who have been inquisitive into these affairs. But it is not so generally agreed, of what antiquity the use of them, in our *European* parts, hath been.

John Gerard Vossius in his Treatise *De Scientijs Mathematicis* Cap. 8. (Printed in the year 1660, but written at least ten years before, as appears by the Epistles prefixed; which are dated 1650.) says, they have not been of use in Europe for much more then *three hundred and fifty* years; or, at the farthest, *short of four hundred*. So that he thinks they came not into use here, till about the year of our Lord 1300; or at the farthest, later then the year 1250.

P. Mabillon, in his Treatise lately printed *De Re Diplomatica*, (by which he appears to have been a Diligent and Curious inquirer into ancient Records and Charters) tells us (*L. II. cap. 28.*) that he hath not found them any where used sooner than the *fourteenth Century*: which is yet somewhat later than the time assigned by *Vossius*.

What time is assigned by others I cannot say.

But (as I had occasion elsewhere to discourse; in a
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Treatise of *Algebra*, now in the press;) I think their use in these parts to have been much ancients. As old at least as the times of *Hermannus Contractus*, who lived about the year of our Lord 1050. (that is, about the middle of eleventh Century:) If not so frequently in ordinary affairs; yet at least in Mathematical things, and especially in Astronomical Tables.

They came to us, I suppose, first from the *Moors* in *Spain*, from whom we had our *Arabick* learning, especially the *Astronomical*. And it must needs be as ancient as any *Latine Translations* are out of *Arabick*, of *Astronomical Tables* and other *Astronomical Treatises*. Which could neither be well understood in *Arabick*, nor translated into *Latine*, without the use of such Figures; which occur frequently in those Authors.

But I do not remember, that I have any where seen any Monument of them more ancient than the Mantle-tree here described.

The sides of the Chimney, by which the Mantle-tree is supported, are of stone: But the Mantle-tree it self is of Wood, whether of Oak, I cannot say, or rather (as it seems to me) of some other hard wood, which by being kept perpetually Dry, and Smoked, is become as Durable. And it may yet (for ought appears) so preserved, continue for some hundreds of years more. For I did not discern in it, any thing either of Worm, or of Rottefulness, or any tendency to it.

It is all over as Black as Ink (but not Glossy;) not so painted, but having by Age and Smoke contracted that colour.

The length of it, AB, is five Foot, nine inches: Its Breadth or Depth, at the ends, (as AC, BD,) is one Foot, (or rather eleven inches and a half;) but at the middle, as EF, somewhat less; being somewhat hollowed, Arch-wise.

It is all carved from end to end. The lower part of it is abated, in like manner as in the Mouldings of other Chimnies. On the front of the upper part, is, in

the one half, the Sculpture of a Dragons Head, and Wings, (but, for the rest of the Body, it is so abated as the space would permit:) In the other half, there is (beginning at the middle) on three squares parted from each other by a deep furrow or channel, the date as it is here expressed ; and, on a fourth, a Flower ; On a fifth, the two letters *W. R.* within an Escoccheon, representing (I suppose) the name of him to whom it did then belong. And then, in two lesser squares as the space would permit (one over the other) Flowers, as before. The Letters and Figures, on their several squares, are not ingraved or cut in, but prominent (by way of bas-relief) the wood being abated round about them. The o over the A, is a round o ; but that over the M, is a square o ; and part of this o hath been lately pared off with a knife, by some body (it seems) who had a mind to see of what colour the wood is underneath ; and it appears there, not so black as the rest, but fuscous of a dusky smoke colour. And this, as I remember, is all the defacing that appears in the whole Mantle-tree.

I have given you this particular account of it, and caused it to be thus exactly delineated ; that, upon the whole matter, you may see how little reason there is to suspect any thing of forgery or imposture in it.

Hence it appears, that the use of such figures here in *England*, not only in Astronomical Tables, and other like pieces of Learning, but even on ordinary occasions, is at least as ancient as the year 1133 ; which was the 33th year of King *Henry* the first. And I judge it to have been yet somewhat ancientser, because the shape of the figures, though not come just to the shape which we now use, was even then considerably varied from the shape of the Arabick figures ; which argues they had then been for some time in use ; such change of shape in figures and letters coming on gradually with time.

The foot of the figure 3 being turned backward, makes it more resemble the Arabick figure (which is much the same with this, save that what here stands upright,

right, doth there ly flat ;) and I find it so constantly in many of the ancient Manuscripts before the use of Printing came in.

Nor need it move any scruple at all, that part of the number is expressed by the numeral Letter M, (or the word *Millesimo*, of which M^o is but a contraction,) while the rest is expressed in numeral figures. For the like doth oft occur in old Manuscripts; and, sometimes, even at this day. And it doth rather favour the simplicity of that Age, (not very nice in such things, especially amongst Mechanicks) than any design of impo-
sture.

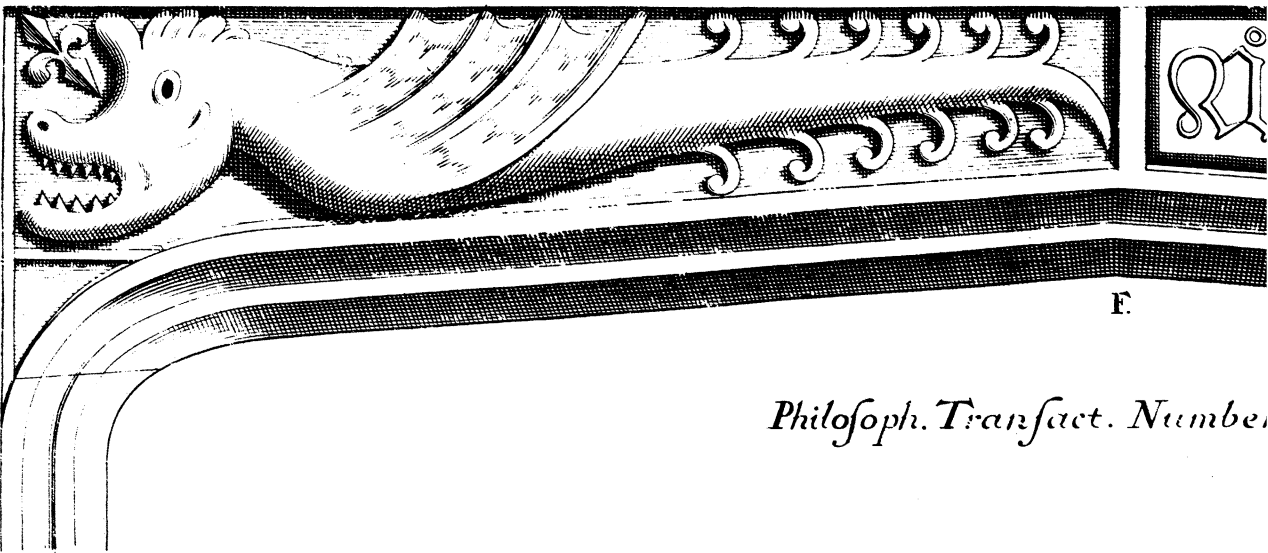
If you, or your friends, light on any such Monument of equal or greater Antiquity than this; you may please to impart it, to

Novem. 16. 1683.

Yours, &c.

A.

E.

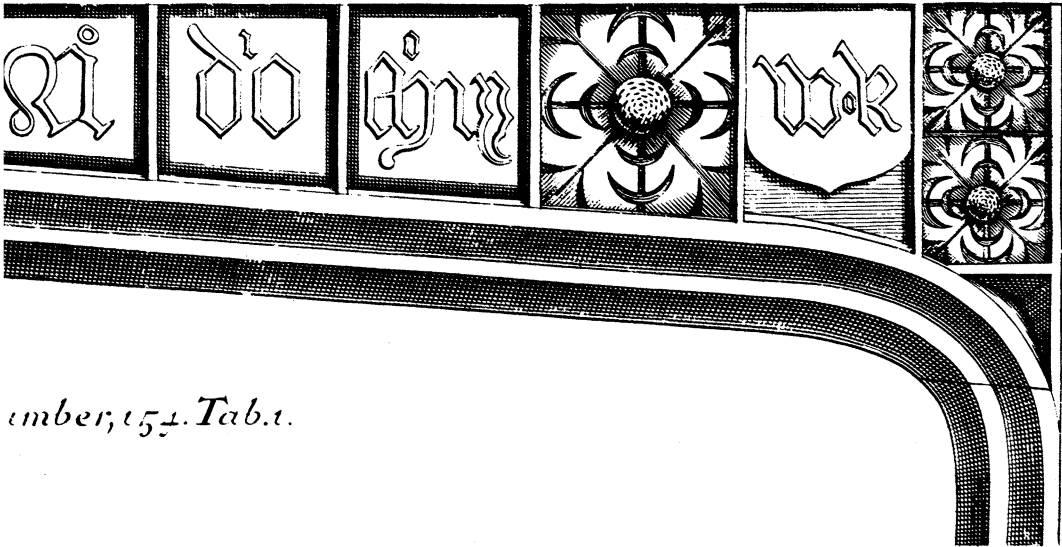


C.

F.

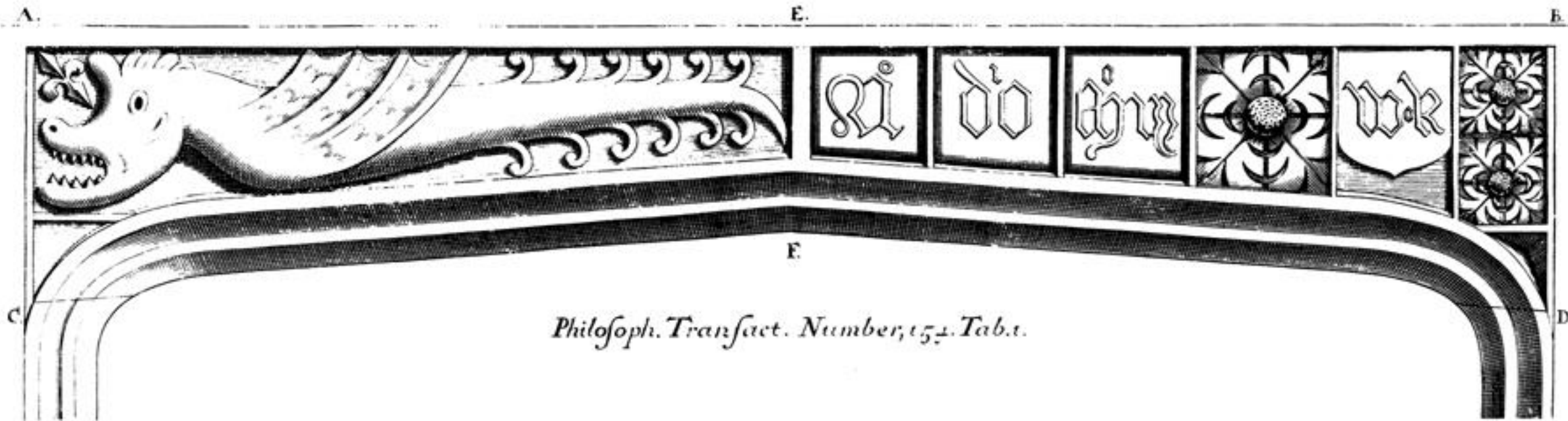
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B.



D.

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