

II. *An Account of the Standard Measures preserved in the Capitol at Rome.* By Martin Folkes, Esq; V. P. R. S.

IN the Wall of the Capitol is a fair Stone of white Marble, of the Length of 8 Foot 5 Inches *English*, and of the Breadth of 1 Foot 9 Inches and a half; upon which are inscrib'd the Standards of several Measures with these respective Inscriptions:

Piede Ro : Pal. III. Onc. XII. Deti XVI.
Piede Greco.

Canna di Archit. Palmi X.

Staiolo Pal. V. Quar. III.

Canna di Merca. Palmi otto d' altra misura.

Braccio di Merc. Pal. III. d' altra misura

Braccio di Tefitto di Tela.

Curante Lu. Poeto.

The Lines that represent these Measures, are cut in the Marble, pretty deep; but as they have, consequently, a considerable Thickness, it is somewhat difficult to be very exact in taking off their Dimensions. I, however, attempted to do it as nearly as I could, by setting the Point of my
Compasses

Compasses in the middle of the cross Lines, that are drawn to determine the Beginnings and Ends of the Measures. The Palm of the Architects is easier to give than the others, by reason the whole Canna is inscribed on the Stone: This I therefore took off, as I presume others have generally done, and then divided it into 10 equal Parts. Afterwards my chief Attention was given to the *Roman* Foot, as of greater Consequence than the other Measures. They all, however, follow as they occur'd to me, in such Parts as the *London* Foot contains a thousand of.

The *Roman* Foot 966 +. This is divided upon the Stone, first into 4 Palms, and then on the upper Part into 12 Unciæ, and on the lower into 16 Deti, according to the Inscription.

The *Greek* Foot 1066 +. This is also divided like the *Roman*.

The *Canna* of the Architects 7325. It is divided into 10 Palms, each of which is therefore $732\frac{1}{2}$ of the *English* Foot.

The *Staiolo* being 5 Palms and $\frac{3}{4}$ is 4212—.

The *Canna de Mercanti* divided into 8 Palms of another Measure, 6 Foot 6 Inches $\frac{2}{3}$.

The *Braccio de Mercanti*, divided into 4 Palms of another Measure, 2 Foot 9 Inches $\frac{11}{24}$.

The *Braccio di Tessitor di Tela*, divided into 3 Parts, 2 Foot 1 Inch $\frac{1}{4}$.

The Palm of the Architects is assign'd by Mr. *Greaves* 732 of the *English* Foot; and the same is given by Monsieur *Picart* to the *Paris* Foot, as

494 $\frac{1}{4}$ to 720; which reduced, becomes 732 + of the *English* Foot, as before, and as it came out from my own Tryal.

The *Roman* Foot is given by *Picart* from this very Stone 653 $\frac{1}{10}$ of such Parts as the *Paris* Foot contains 720; that is, by Reduction, 967 + of the *English*; and the same by *Fabretti*, who also measured it upon this Stone, is assign'd to the Palm of the Architects, as 2040 to 1545; which reduc'd upon the former Measure of the Palm, is 966 $\frac{1}{2}$ of the *English* Foot. These Measures come out as near as the Nature of the Standard can possibly allow; and as it was somewhat fresher in Monsieur *Picart's* Time than it is now, I would make no Difference in the Proportion he has assign'd; but suppose the *Roman* Foot on this Marble was intended to be such a one as should contain 967 Parts of the *English* very nearly.

Mr. *Greaves* had long before assign'd the Measure of the *Roman* Foot from *Cossutius's* Monument, to be 967 of the *English*, and had preferred that Measure to the others he had taken from the Tomb of *Statilius*, and the *Congius* of *Vespasian*. And I think one can make no doubt, from what has been said, but *Cossutius's* Foot was the Foot intended to be inscribed upon this Marble; though that Monument is itself now lost: at least when I was at *Rome* I could get no Intelligence of it, though I made a diligent Enquiry amongst all the People likely to be acquainted with it.

Fabretti, in his Work concerning Aqueducts, where he gives the above-mentioned Proportion of the

the Palm to the Foot, finds fault with *Lucas Pætus*, as having made a wrong Calculation of this Proportion in his Book, *De Mensuris & Ponderibus*. True it is, that the Proportion there given by *Pætus*, does not agree with the Foot upon the Marble, but yet it is no false Calculation, as *Fabretti* thought ; and had he examined *Pætus*'s Book with Care, he would have been sensible this is not the Foot he there contends for, but the *Cossutian* Foot which *Lucas Pætus* in his Book disputes against. The Truth therefore is, that he either alter'd his Mind after the writing of that Book, before the Marble was set up ; or, more probably, that tho' he had the Care of having these Measures inscribed on the Marble, he was directed by a superior Authority what Measures he was to have engraved ; and that accordingly he had, as near as he was able, the *Cossutian* Foot described for the ancient *Roman* Foot on the Stone : And that this was the Case, and no Mistake about the Number, as *Fabretti* supposes, appears not only from the Tenure of his Book, where he condemns *Cossutius*'s Foot, which there appears, but also from his Scheme at the latter End, where he has given what he calls *Scema pedis legitimi*, agreeing with his own Numbers, viz. 12 Inches, whereof $9\frac{2}{3}$ make the Palm of the Architects, and also the *Mensura Colotiani & Statiliani pedis*, agreeing with that now inscribed on the Marble. The *Colotian* is the same Monument as the *Cossutian*, so called from the Person in whose Possession it had formerly been ; and he had before said, p. 5. that according to the Testimony of *Philander*, the *Statilian*

tilian agreed with it; though Mr. *Greaves*, who measured both these Feet with great Care, found some Difference between them, stating the *Cossutian*, as above, 967, and the *Statilian* 972. But by *Pæ-tus's* quoting *Philander*, it is plain he had not himself measured the latter; and therefore the Foot, called by him the *Colotian* and *Statilian*, is indeed purely the *Colotian* or *Cossutian* Foot; and the same has occurred to me also very nearly from my Measure of the Height of the *Trajan* Pillar, which I find, from the Ground to the Top of the Cimatium of the Capitol, to be 115 Feet 10 Inches $\frac{3}{4}$; and this Height divided by 120, gives very nearly 966 for the Quotient.

For the *Greek* Foot there seems to be no further Mystery, than that it was intended to be made to the *Roman* in the Proportion collected from *Pliny*, which is, that 625 *Roman* Feet made 600 *Greek*; by which Account the *Greek* Foot should contain 1007 of such Parts as the *Roman* contains 967; and the actual Quantity I took off was 1006.

III. Observationes nonnullæ notatu non indignæ; Anno 1734. Ab Johanne Frid. Weidler, R. S. S. &c. Vitembergæ factæ.

I. DIE xxiii. Januar. A. 1734. iterum apparuit splendida admodum *Aurora Borealis*, vesperi hor. vii. m. 6. Sub septentrionem vilus arcus ater,
cum