PHILOSOPHICAL TRANSACTIONS.

For the Month of 1698.

Juns

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IV. Account of a Book, La Meridiana del Tempio de S. Petronio, &c. i. e. The Meridian Line of the Church of St. Petronio, drawn and fitted for Astronomical Observations, in the Year 1655. revised and restored in the Year 1695. by Signior John Dominico Cassini, Primary Astronomer of the School of Bononia Pontificial Mathematician, of the Royal Academy of Sciences, and Fellow of the R.S. Printed at Bononia 1695. in Fol. V. A Catalogue of Books lately printed, not mentioned in these Transactions. VI. Extracts out of some late Accounts and Letters.

Dr. Martin Lifter, Fellow of the Colledge of Physicians and R. S. concerning a Roman Sheild.

CInce my former, having procured an old Roman Shield, of . a different form from that I had before, and observing them both to be of different Materials from the usual Descriptions of them (which I also apprehend to be in other paris defective) I resolved to make a more particular Inspection into their Texture, and whereas they are generally faid to be è lig. no, corio superinducto, upon a strict Survey, there is nothing of Wood, but the Handle, in either of them. The Ancient Ro. mans I observe had Three Words, Scutum, Parma, & Clypeus, for that defensive Weapon we generally English a Sheild, which notwithstanding their different Forms or Matter, their Authors (especially in the Declension of the Empire) frequently confound, as, if I mistake not, we do Sheild, Buckler, and Target. The Scutum, & Clypeus, in Form, quæ enim rotunda. & in orbem justum relata, Clypeos dixere, (and of this fort are those votive Sheilds upon the Colums or Trunk of Palm Trees. inscribed, VIC. AVG. or DAC. PAR. &c. in their old Coins) quæ in longum exibani, Scuta, both the Scutum and Parma, are by very good Authors, as well more ancient as modern, positively said to be of Wood covered with Leather, and so particularly Mr. Ob. Walker, in his late ingenious Hift. of Coins; but the ensuing Description will evince, that Bernardus ipse non videt omnia. This Sheild or Buckler is of the Parma Kind, and rightly so called, quod è medio in omnes partes sit par, whereas the Scutum was mostly Oval, tho' fometimes imbricatum, with Corners equally broad, it is Fifteen Inches Diameter, whereof a little more than a third part is taken up with the Umbo, or protuberant Boss at the Navel, which is made of an Iron Convex Plate, wrought hollow on the infide, to receive the Gladiator's Hand, upon the Center of this is a leffer Boss, wherein there seems to have been fixed, some kind of Cuspis, or sharp offensive Weapon, to be used when they came to fight Hand to Hand, but the Form of this I cannot describe, both the Sheilds being defective in that point; nor can I receive any Light from my Coilection of Coins, for tho' it feem to be the same that Mars Bellator or Gradious (for Mars Quirinus is not armed or marching) is usually described with, yet the Sheild being carried in the Lest-Hand, only the Back Part of it is apparent. From the faid Umbo the Sheild is Four Inches and an half broad on each fide, in which are 11 circular equidiftant Rows of Brass Studs of that Size, that

Vide Fig. 9. 222 are set in the outmost Circle, which is 4 Foot wanting 3 Inches, (for that is the Circumference of the Buckler) and so proportionably in the lesser Circles to the Center of these 12 Rows of Brazen Studs, the inmost Circle is placed upon the

Umbo

Umbo it felf, the next 8 upon as many circular Plates of Iron, each a third of an Inch broad. The two outermost upon one thicker Plate an Inch broad: in the little Intervals between these circular Plates are plainly discovered certain cross Lamine, that pass on the Back of the other, from the Umbo to the exterior Circle; and these Iron Plates are also about the third part of an Inch at the broader End towards the Circumference, but gradually contracted into a narrower Breadth, that they may be brought into the Compass of the Umbo at the Center. The inner Coat next to those Iron Plates (for I cut it a little open behind, that I might more distinctly discern the Work) is made of very thick hard strong Leather, which cuts bright, somewhat like Parchment. Upon that is a second Cover of the same, and on the outside of this are plaited the Iron Pins that run through the Brass Studs; for the above-mentioned Brass Studs are cast purely for Ornament upon the Heads of the faid Iron Pins the fixth part of an Inch long, that none of the Iron appears: this reminds me of Julius Cefar's Policy, who, as Sustanius tells us, countenanced this piece of Pride or Offentation in his Army, ut Argento & Auro politis Armis ornaret, simul & ad speciem, & quo tenaciores eorum in prælio essent, metu damni. The next Cover to the plaiting of the faid Nails (which pass through the circular and cross Iron Plates, and both the Leather Covers) is a pure linnen Cloth, but discoloured, though perhaps not with Age only, but fower Wine and Salt, or some other Liquid wherein it seems to have been steeped. And lastly, upon the said Linnen is the outmost Cover, which is of foster Leather, all which Coats that compole the Sheild, are bound together by two circular Plates of Iron, a thin and narrow one towards the Center, and a thicker and large one, an Inch broad at the Circumference, which is curiously nailed with two rows of very small Tackets, above 400 in Number, the vacant Holes whence some of the Nails are dropt out, are little bigger than to admit the Point of a Pair of small Compasses, both which Rims do likewise fasten the Handle (the only part of Wood) which has also Six other Iron Plates about three or four Inches long, to secure it.

That Sheild which I lately procured, differs not fo much in Size (though it is compleatly a Foot larger in the Circumference) as in the Form, for whereas this already described is almost flar, except the swelling Umbo, this is absolutely Concave,

and from the Skirts of the protuberant Boss in the middle, it rises gradually to the Circumference, which is night here inches perpendicular from the Center; this has Fourteen Rows of the like Brass Studs, but the circular Plates of Iron they are fixed in, do not lie upon other cross Plates, as the former does, but each from the Center, upon the outer Edge of the other,

which occasions its rising in that Concave manner. That these were part of the Acoutrement of the Roman Equites, rather than either the Velites or Hastati, I conclude, because that, though all in general had Sheilds, yet those of the Velites, who were as the Forlorn Hopes, feem more flight, and are expresly said to be, è ligno corio superinducto, those of the Hastati are not only said, e pluribus lignis & asserculis constit, &c. but were also Four Foot long to cover the whole Body, when stooping; of which kind were likewise those of the Principes and Triarii. Whereas the Description that the Anonymous Author of Roma Illustrata with Fabricius's Notes, gives in his Armatara Equitum, comes the nighest this, Scutum sive Parmam habebant ex bovillo corio, arte leviter durata, but then he adds, eoque mero, nulla materie subjecta, omitting not only the ornamental Studs, but the Iron Work, which Camillus first contrived as a defence against the immense Swords of the Gauls. I have endeavoured to make this Description more intelligible by a Draught of the Sheild above-mentioned. Vide Fig. 9.

Leeds, 26 Febr. 1697.

POSTSCRIPT.

Aving he and of some Roman Coins lately plow'd up about Nottingham, I procured a Parcel of them, but they prove common, and most of Tetricus, tho' some also of Gallienus, Victorinus, and Claudius Gothicus.