

Pyramidographia :  
OR, A  
DESCRIPTION  
OF THE  
PYRAMIDS  
IN  
EGYPT.

By JOHN GREAVES, *Professor of Astronomy  
in the University of Oxford.*

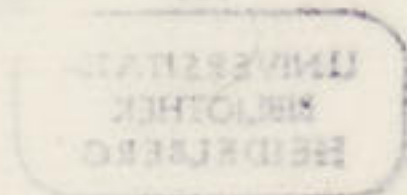
*Romanorum fabricæ & antiqua opera (cum veniâ id dictum sit)  
nihil accedunt ad Pyramidum splendorem & superbiam.*

*Bellon. lib. II. Observ. cap. 42.*

N<sup>o</sup> 80. VOL. II.

7 P

This





*This LETTER underneath was written by Mr. Greaves to the famous Claudius Hardy, who published EUCLID's DATA, and was in great Esteem for his Learning in the Mathematicks, and his Skill in the Oriental Languages.*

Clarissimo Doctissimoque Viro D. C. H. To the most worthy and most learned D. C. H.

Quatuor anni elapsi sunt (vir clarissime) ex quo propter longinquam peregrinationem à me in Orientem susceptam, nulla mihi opportunitas data est, affectum, sincerumque tibi animum testandi. Tandem favente NUMINE, salvo & incolumi reverso, conceditur nonnihil otii, & de periculis præteritis, & de amicis veteribus, cogitandi. Inter quos si rectè de humanitate, studiisque tuis judico, nemo erit qui de reditu meo, majori, quàm tu, lætitiâ afficiatur. Eaque tantò erit accumulatio, cum intellexeris iter tam periculosum non alias ob causas initum, nisi ut linguis orientalibus, & studiis astronomicis, peregrè felicius incumberem, in quibus utrique quantum profeceris, eruditis tuis scriptis, literatis omnibus satis comprobasti. Quapropter breviter, strictimque, ubi commemoratus sum, quæ præstiterim, & quos libros mecum adduxerim, pro veteri amicitia tibi indicabo. Primum annum Constantinopoli egi, ut me totum linguæ Arabicæ addicerem; sed spe falsus, idoneis destitutus magistris, ad alias curas animum induxi, eumque diligenti librorum MSS. disquisitioni applicui. Quo quidem in genere non poenitendam operam locavi: nam præter varios codices Arabicos, Persicos, Turcicos, propemodum de universis scientiis scriptos, & præter lexica melioris notæ tribus hisce linguis deservientia, coëmi insuper penè omnes antiquos mathematicos Græcos, in idioma Arabicum ante aliquot sæcula traductos, unà cum operibus præcipuè astronomorum recentium, apud Arabes, & Indos, maximè insignium. Inter verò illos antiquos, non leviter gaudeo adhuc superstites reperiri quatuor libros Apollonii Pergæi geometræ subtilissimi,

في كتابي الهندسة

Conicorum libri quatuor;

quorum Pappus, alique meminerunt. Constantinopoli cum classe Turcicâ solvi, eo anni tempore, quo solent, multis navigiis simul, pro more gentis, Alexandriam petere. Fretus satis prosperâ navigatione Rhodum appuli, ubi, propter auctoritatem Posidonii, clanculum in submœnianis Christianorum hortis altitudinem solis sæpè obser-

of which Pappus, and others, make mention. I sailed from Constantinople with the Turkish fleet, at the same time the great convoy of that nation uses to set out for Alexandria. My passage was good, and I arrived at Rhodes, where, in respect to Posidonius's authority, I often took the sun's altitude privately, in the gardens of the Christians, without the walls. Departing

81 B 1668

RES

UNIVERSITÄTS-  
BIBLIOTHEK  
HEIDELBERG



fervavi. Indè post sex dies è portu discedens, octo dierum spatio, flantibus leniter Etesijs, Alexandriam perveni; ubi corruptis Judæis, qui vectigalibus ibi præfunt, instrumenta mea astronomica sine periculo exposui. Erant autem diversa, ex ære ut plurimum fabrefacta, & ab egregio artifice summâ cum diligentia constructa, quorum maximum quadrans erat totus æneus, radium obtinens septem eorum pedum, qui apud Anglos veteri edicto regio usurpantur. Alexandriæ sex menses continuos hæsi, soli stellisque intentus, quoties per caligines, aut pluvias, licebat, quas illic, mediâ præcipuè hyeme, contra receptam opinionem, & crebras, & violentas, esse sensi. Laboribus & vigiliis defessus, relaxandi animi gratiâ bis Memphim petii, seu, ut rectius loquar, القاهرة nam antiquâ

Memphi orientior est hodierna Elkahira septem ad minimum millibus passuum. Inde ad sepulcra veterum Ægyptiorum accessi, & cryptas illas subterraneas subii; post ad pyramides me contuli, earumque justam magnitudinem, idoneis ad eam rem adjutus instrumentis, deprehendi; & multa illic, dum omnia curiosius perlustro, nec à priscis scriptoribus, nec à recentioribus, literis mandata annotavi. Opera fanè stupenda, & ab ipsis antiquis inter orbis miracula meritò judicata, sed à nemine (quòd sciam) pro eorum dignitate satis descripta.

Interiorem cameram, & nonnulla secretiora adyta, temporis injuriâ nondum corrupta, nec unquam, si rectè judico, corrumpenda, mensuris Anglicis diligenter mensus sum, adeò exactè, ut è viginti mille partibus, in quas viginti pedes, lineis transversis, sive potius diagoniis, divisi, ne unam quidem, vel deesse, vel superesse, existimem. Quod idèò tanto accuratius præstiti, ut ex istâ comparatione omnium gentium mensuræ, quæ hodie sunt, aut olim fuerunt, è duraturo aliquo monumento posteris signari possint. Quod quidem si à Mathematicis olim præstitum fuisset, selectis aliquibus idoneis locis, temporum injuriæ non obnoxiiis, minùs hodie incerti essemus in antiquorum mensuris investigandis. Quid de meo consilio censendum sit, eruditorum judicio permitto; me certè, neque propositi, neque laboris, suscepti poenitet. Te verò (vir clarissime) inter alios præcipuè oro, & obtestor, ut pondera, & mensuras Gallicas, summâ diligentia cum archetypis collatas, & regio sigillo, ut fieri assolet, munitas, ad me transmittas; & si qua numismata, vasa prisca, vel pedes vetusti, ab hæredibus nobilissimi D. viri Perescii recuperari possint, meo ære compares. Multum ille in hac palæstrâ desudavit, & quantum ex literis  
ipius

*Departing that port after six days, a gentle easterly gale, in eight days, brought me to Alexandria; where bribing the Jews, who have the collecting the customs, I landed my astronomical instruments in safety. I had several of them, most of them of brass, and made by a notable workman, with extraordinary accuracy; the biggest whereof was a brass quadrant, whose radius was seven ancient statute foot of England. I continued six whole months at Alexandria, observing the sun and stars, as often as fogs and rains would permit; which, contrary to the received opinion, I found to be frequent and violent, especially in the depth of winter. Being spent with labour and watching, I went twice to divert myself to Memphis, or, to speak more properly, Elkahira: for the present Elkahira (Grand Cairo) is at least seven miles to the eastward of the ancient Memphis. Thence I repaired to the sepulchres of the ancient Egyptians, and entered those subterranean cells, or caverns; thence I went to the pyramids, and, having fit instruments for that purpose, took their exact dimensions; observing there many things, as I curiously view'd them, which have not been delivered in writing either by the ancient or modern authors. They are indeed amazing structures, and deservedly reckoned by the ancients among the wonders of the world, but not yet described as they ought to be by any one that I know of.*

*I carefully took the dimensions of the inner chamber, and some more private places, which time has not yet, nor, if I mistake not, ever will destroy, with English measures; and that so exactly, that I believe there is not one part over or under of 20000, into which twenty foot are divided by cross, or rather diagonal lines. Which I was the more exact in, to the end that the measures of all nations that now are, or formerly were, may be transmitted to posterity from some lasting monument, by comparing them with these. Had this been formerly done by mathematicians, choosing for the purpose some proper places not exposed to the injury of time, we should not at present be so uncertain in the search after the measures of the ancients. I leave it to the learned to determine, what judgment is to be made of this my design: for my part I neither repent my attempt, nor my labour. I intreat and conjure you (most worthy sir) to send me the French weights and measures, carefully compared with the standards, and sealed by the king's authority, as is usual; and if any coins, old vessels, or ancient feet can be obtained of the heirs of the most noble Perescius, that you will buy them upon my account. He laboured much in this affair, and, as may be conjectured by his letters, had he brought forth what he had so long conceived,*



ipſius licet conjicere, ſi peperiffet, quæ tamdiu parturivit, omnium induſtriam & conatus facilè ſuperâſſet. Ipſe dum peregrè agebam, tanquam itineris *ποδῶν*, Arabum, Perſarum, Turcarum, Itolorum, Hiſpanorum, Germanorum, varia, & diverſa pondera, & meſuras, meis oculis manibùſque ſubjeci, & cum Anglicis ſedulò & fideliter contuli. Idem & de Gallicis in animum induxiſſem, ſi per Pariſios domum redire contigiſſet; ſed, ſpe fruſtratus, iſtam tibi, tuæque diligentiae provinciam demando. Tu me interea eadem benevolentia proſequèris, quâ ſolebas; & ſi quid, quod mihi adjumento eſſe poſſit, repereris, viro doctiſſimo, meique amantiſſimo, D. Dorrel, in ædibus oratoris Angli, committes. Vale.

Londini, 18 Kal.  
Jun. MDCXLI.

Tibi addiſtiſſimus,

JOANNES GRAVIUS.

*conceived, he would doubtleſs have outdone all others. I, during my travels, by the-by, view'd and handled the ſeveral and ſundry weights and meafures of the Arabians, Perſians, Turks, Italians, Spaniards, and Germans, and carefully compared them with the Engliſh. I ſhould have done the ſame by the French, had I returned home by the way of Paris; but, being diſappointed of it, I commit this affair to your care. Do you continue your wonted good-will to me; and if you happen to find any thing that may be a help to me, deliver it to the moſt learned gentleman, and my very good friend, Mr. Dorrel, at the Engliſh ambaffador's. Farewel.*

London, May  
14. 1641.

Your moſt affectionate,

JOHN GREAVES.

## THE

# PREFACE.

**H**OW high an eſtimation the ancients had of the Egyptian Pyramids, appears by the ſeveral teſtimonies of Herodotus, Diodorus, Strabo, and Pliny. For <sup>a</sup> Herodotus acknowledges, that though there were a temple at Ephesus very renowned, as alſo at Samos; yet the Pyramids were worthier of relation; each of which, ſingle, might be compared with many the moſt ſumptuous ſtructures of the Grecians. Diodorus Siculus confirms as much; who, as he prefers the works of the Egyptians for magnificence before thoſe of other nations, ſo he prefers the Pyramids before the reſt of the Egyptians: It is confeſſed, <sup>b</sup> ſaith he, that theſe works far excel the reſt in Egypt, not only in the maſſineſs of the ſtructures, and in the expences, but

alſo in the ſkilfulneſs of the architects. He farther adds, The greatneſs of the work, and art of the workmen, ſtrike an admiration into the ſpectators. <sup>c</sup> Strabo alſo teſtifies, That three of them are very memorable: two of theſe are accounted amongſt the ſeven miracles of the world. Laſtly, <sup>d</sup> Pliny, though he judges them to be an idle and vain oſtentation of the wealth of kings, yet he grants, that three of them have filled the world with their fame. Which three by his deſcription, and by ſuch indications as may be collected out of Diodorus and Strabo, muſt neceſſarily be theſe three, which are now extant, and of which I intend eſpecially to diſcourſe. For <sup>e</sup> Diodorus writes, That they are ſeated on Libya-ſide, an CXX ſtadia (or furlongs)

<sup>a</sup> Καίτοι αξιολογός γε ὁ ἐν Ἑρέσῳ ἐστὶ νεὸς, καὶ ὁ ἐν Σάμῳ ἦσαν μὲν νῦν αἱ πυραμίδες λόγῳ μείζονες, καὶ πολλῶν ἐκάστη αὐτέων Ἑλληνικῶν ἔργων καὶ μεγίστων ἀνταξίη. Herod. l. 2.

<sup>b</sup> Ὁμολογεῖται ὅτι ταῦτα τὰ ἔργα πολὺ πρότερον ἢ καὶ Ἀιγυπτίων, ἐμὸν τῶ βάρεϊ τῆ κατασκευασμάτων, καὶ ταῖς δαπάναις, ἀλλὰ καὶ τῇ πολυτεχνίᾳ τῶν ἐργασαμένων. Diod. Sic. Biblioth. l. 1. Τῶ δὲ μεγέθει τῶν ἔργων, καὶ τῇ κατὰ τὴν τέχνην χειρουργίᾳ, θαυμαστὴν τινα κατὰ πλῆξιν παρέχονται τοῖς θεαμένοις. Ibid.

<sup>c</sup> Τρεῖς δ' αξιολογοί, τὰς δὲ δύο τέτων καὶ ἐν τοῖς ἑπτὰ θεάμασι καταριθμῶνται. Strab. l. 17.

<sup>d</sup> Regum pecunia ociosa ac stulta ostentatio.— Tres quæ orbem terrarum implere famâ. Plin. l. 36. c. 12.

<sup>e</sup> Αὗται δὲ κεῖνται κατὰ τὴν Λιβύην τῆς Μέμφως ἀπέχουσι σαδίας εκατὸν καὶ ἑκοσι, τὴ δὲ Νεῖλε πέντε πρὸς τοῖς τετρακόκοις. Diod. Sic. l. 1.

from



from Memphis, and from Nilus XLV. We likewise read in <sup>f</sup> Strabo, XL stadia from the city (Memphis) there is a certain brow of a hill in which are many Pyramids; who, presently after describing more particularly the three greatest, gives us this character: These three stand near to one another upon the same plain. And if this be not sufficient to point them out, <sup>g</sup> Pliny delivers many evident marks whereby to discover them: These three (as he informs us) are very conspicuous to those that sail upon the Nilus; they are seated on Africa side, upon a rocky and barren hill between the city Memphis and that place which we said is called the Delta, from the Nilus less than IV miles, from Memphis VI; there being a village opposite to them, which they name Busiris, from whence they use to ascend up to them. All which characters were and are applicable to none but only to these three.

Having thus discovered their true place, or situation, we shall next discourse of the authors who have written of them. Amongst the ancients, there were many who thought it worth their labour to describe them. For Pausanias, as it were, complaining that the Grecians had been very curious in describing these, whilst they had omitted many remarkable structures of their own, writes thus: <sup>a</sup> That the Grecians admired things of strangers more than of their own, seeing that some historians of note had most accurately described the Pyramids of Egypt, whereas the treasury of Minyas, and walls of Tiryns, (places in Bœotia) no less to be admired than these, had been omitted by them. Pliny gives us a large catalogue of authors that had purposely treated of this argument: <sup>b</sup> Those which have writ of them, are, Herodotus, Euhemerus, Duris Samius, Aristagoras, Dionysius, Artemidorus, Alexander Polyhistor, Butorides, Antisthenes, Demetrius, Demoteles, Apion: Where we are beholden to him for preserving the names of so many writers, though their works, (unless those of Herodotus) by the injury and calamity of times, have long since perished. Besides these,

Diodorus Siculus, Strabo, Pomponius Mela, Pliny, Solinus, and Ammianus Marcellinus, (the names of modern authors I purposely omit) have given us some relations of them. But it may be, if the writings of Aristides had not perished, who in his *Δόξαι Αἰγυπτίας* speaks thus of himself, <sup>k</sup> After that I had enter'd into Ethiopia, and four times travelled all over Egypt, and had left nothing unhandled, neither the pyramids, nor labyrinth, nor temples, nor chanel, and partly had procured out of their writings such measures as might be had, and partly with the priests had measured such things as were not obvious, yet could I not preserve them entire for thee, seeing the books which thy servants, by my appointment, transcribed, have perished; or, if we had the sacred commentaries of the Egyptians, so often cited by <sup>l</sup> Diodorus; we might receive better satisfaction, and be also more content with the loss of those other writings of the Grecians. But seeing the vicissitudes and revolutions of times have deprived us of these, whilst the Pyramids have been too great to be consumed, it will be no superfluous labour to imitate the examples of the ancients, and to supply the loss of them, by giving a distinct narration of the several respective dimensions and proportions of these pyramids: in which I shall tread in as even a path as I can, between truth and the traditions of such of the ancients as are still extant; first putting down those relations which by them have been transmitted to us; and next, shewing in what manner, upon examination, I found the Pyramids in the years one thousand six hundred thirty-eight, and one thousand six hundred thirty-nine, or in the thousand forty-and-eighth year of the Hegira. For I went twice to Grand Cairo from Alexandria, and from thence into the deserts, for the greater certainty to view them; carrying with me a radius of ten feet most accurately divided into ten thousand parts, besides some other instruments, for the fuller discovery of the truth. But before I descend to a particular description, I shall make inquiry by whom, at what time, and to what end, these monuments were erected.

<sup>f</sup> Τετταράκοντα δ' ἀπὸ τῆς πόλεως σαδίας προελθόντι ὁρεῖν τις ὁρὺς ἐστίν, ἐφ' ἣ πολλὰ καὶ μὲν Πυραμίδες εἰσὶ. Strab. l. 12. Ἀυταὶ μὲν ἐν ἑγγύς ἀλλήλων εἰσὶ τῷ αὐτῷ ἐπιπέδῳ. Idem ibid.

<sup>g</sup> Reliqua tres] sanè conspicuae undique innavigantibus, sita sunt in parte Africa, monte saxeo sterilique inter Memphim oppidum, & quod appellari diximus Delta, à Nilo minus IV millia pass. à Memphi sex, vico appresso, quem vocant Busirin, in quo sunt assueti scandere illas. Plin. l. 36. c. 12.

<sup>h</sup> Ἕλληνες δ' ἀρα εἰσὶ δεινοὶ τὰ ὑπερόρια ἐν θαύματι τίθεσθαι μείζονι ἢ τὰ οἰκεῖα, ὅποτε ἀνδράσιν ἐπιφάνεσιν ἐς συγγραφὴν, πυραμίδας μὲν τὰς αἰγυπτίας ἐπὶ ἡλθεν ἐξηγήσασθαι πρὸς τὸ ἀκριβέστατον, θησαυρὸν δὲ τὸν Μινύου καὶ τὰ τεῖχνη τὰ ἐν Τίρυνθι καὶ ἐπὶ βραχὺ ἡγάγον μνήμης, καὶ ὅντα ἐλάττωσθαι θαύμασθαι. Pausanias Bœotica.

<sup>i</sup> Qui de iis scripserint, sunt Herodotus, Euhemerus, Duris Samius, Aristagoras, Dionysius, Artemidorus, Alexander Polyhistor, Butorides, Antisthenes, Demetrius, Demoteles, Apion. Plin. Nat. Hist. l. 36. c. 12.

<sup>k</sup> Ἐπειδὴ καὶ ᾧ μέχρι τῆς Αἰθιοπικῆς χώρας προελθὼν, καὶ αὐτὴν διερχόμενος Αἰγύπτου τετραγώνισ τὸ σὺμπαν, καὶ παρὲς ἐδὲν ἀνεξέταστον, ὃ πυραμίδας, καὶ λαβύρινθον, καὶ ἱερὸν, καὶ διαύραχας, ἀλλ' ὅν μὲν ἐν ταῖς βίβλοις τὰ μέτρα ὑπῆρχεν ἐκείθεν πορισάμενος. ὃν δὲ μὴ ἐξ ἐτοίμου λαβεῖν ἦν ἐμμετρησας αὐτὸς μετὰ τῶν παρ' ἐκάστοις ἱερῶν καὶ προσητῶν. εἴτ' ἐκ ἐδυνήθην αὐτὰ σοὶ διασώσασθαι τῶν ὑπομνημάτων διαφθαρέντων, καὶ τοῖς σοῖς παισὶ προσέταξα ποιῆσθαι. Aristid. Λόγ. Αἰγυπτ.

<sup>l</sup> Ὡς ἐν ταῖς ἱεραῖς ἀναρχαφαῖς ὁρᾶν ἐστὶ κατακεχωρισμένον. Diod. Sic. l. 1. Οἱ ἱερεῖς τῶν Αἰγυπτίων ἑτορῶσιν ἐκ τῶν ἀναρχαφῶν τῶν ἐν ταῖς ἱεραῖς βίβλοις. Idem ibidem.



## Of the Authors or Founders of the PYRAMIDS.

GREAVES. **I**T is the opinion of some <sup>a</sup> modern writers, that the *Egyptian* Pyramids were erected by the *Israelites*, during their heavy pressure under the tyranny of the *Pharaohs*. And this seems to be confirmed by <sup>b</sup> *Josephus*; who relates, that *whenas time had extinguished the memory of the benefits of Joseph, the kingdom of Egypt being transplanted into another family, they used the Israelites with much severity, wasting them with several labours; for they were commanded to cut divers chanel for the river (Nilus), to raise walls, and cast up banks, whereby to hinder the inundation of the stream; they oppressed also our nation with those fabricks of the Pyramids, compelling them to learn many (mechanical) arts, and inured them to the supporting of labours.* But the sacred Scriptures clearly expressing the slavery of the *Jews*, to have consisted in making and burning of brick, (for the original is לבנים *lebenim*, which the <sup>c</sup> *Septuagint* renders by πλινθος and πλινθεία) whereas all these Pyramids consist of stone, I cannot be induced to subscribe to their assertion.

Much less can I assent to that opinion of <sup>d</sup> *Stephanus*, <sup>e</sup> *Nicetas*, <sup>f</sup> *Nonnus*, and the author of the *Greek* ἑρμολογικὸν μέγα, with some others, who derive the name of the Pyramids ἀπὸ τῆς πυρῆς, that is, from corn, and not ἀπὸ τῆς πυρῆς, from the figure of a flame of fire, which they resemble; because, say most of them, these were built by the patriarch *Joseph*, as σισσοδόχα, receptacles and granaries of the seven plentiful years. For, besides that this figure is most improper for such a purpose, (a Pyramid being the least capacious of any regular mathematical body) the straightness and fewness of the rooms within (the rest of the building being one solid and entire fabrick of stone) do utterly overthrow this conjecture. Wherefore the relations of *Herodotus*, *Diodorus Siculus*, and of some others, but especially of these two, both of them having travelled into *Egypt*, and

conversed with the priests, (besides that the latter made use of their commentaries) will give us the best and clearest light in matters of so great antiquity.

For *Herodotus* writes thus concerning the first of these Pyramids, that, <sup>h</sup> *until king Rhampsinitus's time the Egyptians report the laws to have flourished in Egypt: After whom, Cheops, succeeding in the kingdom, fell into all manner of vice; for, shutting up the temples, he forbade the Egyptians to sacrifice; besides, he commanded that they should be employed in his works, (he means this Pyramid, of which he discourseth) that some of them should receive the stones dug out of the quarries of the Arabian mountain, and that from thence they should carry them to the Nilus; these being wasted over the river, others were to receive them, and to draw them to the mountain, which is called Libycus. There were employed in the work ten myriads of men, every three months a myriad. The people spent ten years in the way in which they drew the stones, which seems to me no less a work than the building of the Pyramid itself.* <sup>i</sup> *Diodorus Siculus*, discoursing of the same argument, gives the erector of this another name, different from that of *Herodotus*, styling him *Chemmis*; but, in the time and person, they both agree, each of them affirming him to have succeeded *Rhampsinitus*, and to have been the father of *Mycerinus*, and to have reigned over the *Egyptians* fifty years. This difference of names between *Herodotus* and *Diodorus*, concerning the same king, may probably be thus reconciled; that *Diodorus* expresses the genuine denomination in the *Egyptian* language, and that *Herodotus* renders the signification in the *Greek*; a practice not unusual with him, and with other approved authors. Thus the patriarch *Isaac* in the Scriptures, being denominated from פֶּחַח, that is, laughter, is by *Alexander Polyhistor*, as <sup>k</sup> *Eusebius* testifies, named Γέλας. Wherefore חם *Cham* in *Hebrew* (or, in the *Greek*

<sup>a</sup> Hen. Spondanus de Cœmeteriis sacris, lib. 1. par. 1. cap. 6. Brodæus Epigr. Græc. εἰς νεκροὺς.

<sup>b</sup> Joseph. lib. 2. Antiq. cap. 5. Ὡς τ' ἦσαν ἐν ὑπὸ Ἰωσήφου τελευτήσαντες διὰ χρόνου μῆκος λήθην λαβόντες, καὶ τῆς βασιλείας εἰς ἄλλον οἶκον μετεληλυθίας, δεινῶς ἐνέβουλον τὰς Ἰσραηλίτας, &c.

<sup>c</sup> Exod. cap. v. σέρε. <sup>d</sup> Ονομάδισαν δὲ Πυραμίδες ἀπὸ τῶν πυρῶν, ὡς ἐκεῖ συναξαγῶν ὁ βασιλεὺς ἐνδεῖαν ἐποίησε σίτη καὶ τὴν Αἴγυπτον. Steph. περὶ πόλεων.

<sup>e</sup> Πυραμίδες] Id est, ædificia quedam, à Joseph. ut nonnulli opinantur, ad condenda frumenta scilicet admodum elaborata. ἀπὸ τῆς πυρῆς, id est, à frumento nomen consecuta. Nicetas in XX Orat. Nazianzeni.

<sup>f</sup> Non à vero, ut inquit Nonnus, abhorret, quin has Pyramides post Josephi tempora, excessumque Judæorum ex Ægypto in Regum sepulchra converterint. Bilius ex Nonno. Ibidem.

<sup>g</sup> Πυραμίδες δὲ πάλιν λέγουσι αἰρεῖα βασιλικά σισσοδόχα, ἀ καλεσκέυασε Ἰωσήφ. Ἑτυμολ. μέγα:

<sup>h</sup> Herod. lib. 2. Μέχρι μὲν νῦν Ῥαμψινίτης βασιλεὺς εἶναι δι' Αἰγύπτῳ πᾶσαν ἐνομοκλήν ἐλεγον, &c.

<sup>i</sup> Diod. Sic. l. 1.

<sup>k</sup> Euseb. l. 6. Evangel. Præpar. cap. 19.

flection,



*flection*. Chemmis) signifying adustion, which anciently might be the same in Egyptian, and *χέω*, or *χαίω*, signifying swarthy visage, or adust; Herodotus might call him Cheops in Greek, whom, in the Egyptian language, Diodorus styles Chemmis. But I go on with Diodorus. This Chemmis, <sup>1</sup> saith he, erected the greatest of these three Pyramids, which are reputed among the seven wonderful fabricks of the world; where he also enlarges the number of the workmen employed by him, to three hundred and sixty thousand, which Herodotus mentions only to have been an hundred thousand; though both of them concur, and <sup>m</sup> Pliny with them both, that twenty years were spent in the building of this Pyramid.

Concerning the second Pyramid, Herodotus and Diodorus assign the author of it to have been Cephren, brother to the former king. Diodorus adds, that by some he is also called Chabryis, and was the son of Chemmis; a difference which I imagine to have been occasioned out of the diversity of pronounciation of Chabryis for Cephren; there being an easy transmutation in letters of the same organ, as grammarians use to speak. Cheops, as <sup>n</sup> Herodotus informs us, being deceased, his brother Cephren reigned after him; who imitated him, as in other things, so in the making of a Pyramid, the magnitude of which is less than that of his brother's. And <sup>o</sup> Diodorus relates, That Chemmis being dead, his brother Cephren succeeded him in the kingdom, and reigned fifty-six years: some say, that not his brother, but his son, which was named Chabryis, reigned after him. This is affirmed by the consent of all, that the successor of the former king, in imitation of him, built the second Pyramid like to the first, in respect of the art and workmanship, but far inferior to it in respect of magnitude.

The third Pyramid was erected by <sup>p</sup> Mycerinus, some call him Mycherinus, as it is observed by Diodorus, who makes him the son of Chemmis, as Herodotus doth of Cheops; the difference between them being, as we noted before, rather nominal than real. The same <sup>a</sup> Herodotus also writes, That some of the Grecians make the third Pyramid

the work of Rhodopis a curtizan; an error, <sup>GREAVES.</sup> in opinion, of those who seem not to know who this Rhodopis might be, of which they speak; for neither could she have undertaken such a Pyramid, on which so many thousand talents were to be spent; neither lived she in this man's time, but in the time of king Amasis. Now this Amasis, as he elsewhere shews, lived long after these Pyramids were in being. The same story is cited both by <sup>r</sup> Strabo and Pliny, both of them omitting the names of the founders of the former two. Strabo gives her a double name; The third Pyramid is the sepulchre of a curtizan, made by her lovers, whom Sappho the poetress calls Doricha, mistress to her brother Charaxus; others name her Rhodope. But, whether we name her Doricha, or Rhodope, the relation is altogether improbable, if we consider either her condition, or the infinite vastness of the expence. For <sup>s</sup> Diodorus, though he rightly acknowledges this Pyramid to be much less than either of the former two; yet in respect of the exquisite workmanship, and richness of the materials, he judges it not inferior to either of them. A structure certainly too great and sumptuous to have been the design and undertaking of a curtizan, which could hardly have been performed by a rich and potent monarch. And yet Diodorus hath almost the same relation, only a little altered in the circumstances: <sup>t</sup> Some say, that this is the sepulchre of the strumpet Rhodope; of whom some of the Nomarchæ (or prefects of the provinces) being enamoured, by a common expence to win her favour, they built this monument. But to pass by this fable, (for it is no better) and to return to our inquiry. The same author immediately before, ingenuously confesses, that, concerning them all three, there is little agreement either amongst the natives, or amongst writers: <sup>u</sup> For they say, Armæus made the greatest of these; the second, Amasis; the third, Inaron. And <sup>w</sup> Pliny, informing us that these three were made in seventy-eight years and four months, leaves the founders of them very uncertain: for, reciting the names of many authors that had described them, he

<sup>1</sup> Diod. Sic. lib. 1. Χέμμις] κατεσκεύασε δὲ τὴν μεγίστην τῶν τριῶν Πυραμίδων τῶν ἐν τοῖς ἐπὶ αὐτοῖς ἐπιφανέσιν αἰσίοις ἡρώεσσιν.

<sup>m</sup> Pyramis amplissima ex Arabicis lapidicinis constat. Trecenta LX hominum millia annis XX eam construxisse produntur. Plin. l. 36. c. 12.

<sup>n</sup> Herod. lib. 3. Τελευτήσαντος δὲ τούτου, ἐπιδέξατο τὴν βασιλείαν τὸν ἀδελφὸν αὐτοῦ Χερφῆνα, &c.

<sup>o</sup> Diodor. lib. 1. Τελευτήσαντος δὲ τοῦ βασιλέως τούτου διεδέξατο τὴν ἀρχὴν ὁ ἀδελφὸς Χερφῆν, καὶ ἡρξεν αὐτὸν εἰς πρὸς τοὺς πενήκοντα, &c.

<sup>p</sup> Πυραμίδα δὲ καὶ ἐπὶ ἀπελίπετο πολλὸν ἐλάσσω τῇ πατρὶ. Herodot. lib. 2.

<sup>q</sup> Herodot. lib. 2. Τὴν δὲ μετ' ἐξέτεροι φασὶ Ἑλλήνων Ροδόπιν ἐταίρης γυναικὸς εἶναι, ἐκ ὁρθῶς λέγοντες, &c.

<sup>r</sup> Λέγουσι δὲ τῆς ἐταίρας ταφὸς γεγονῶς ὑπὸ τῇ ἐρεσσῶν. ἡ Σαπφὸς μὲν ἢ τῇ μελῶν ποιητρίᾳ καλεῖ Δορίχαν ἐρωμένην τῷ ἀδελφῷ αὐτοῦ Χερφῆτι γεγονῶν. ἄλλοι δ' ὀνομάζουσι Ροδόπην. Strab. lib. 17.

<sup>s</sup> Diod. Sic. lib. 1. <sup>t</sup> Diod. Sic. lib. 1. Ταύτην δ' ἐννοίᾳ λέγουσι Ροδόπιν ἐταίραν εἶναι τῆς ἐταίρας, ἥ φασὶ τῶν νομάρχων τινὰς ἐρεσσῶς γενομένης, διὰ φιλοσοργίαν οἰκοδομήσασθαι ἐπὶ ἑλπίσιν κοινῇ τὸ καλὸν ἀσκήσασθαι.

<sup>u</sup> Idem ibid. Τὴν μεγίστην ποιεῖν λέγουσι Ἀρμαῖον, τὴν δὲ δευτέραν Ἀμασίην [γρ. Ἀμασίαν] τὴν δὲ τρίτην Ἰνάρωνα [γρ.] Μάρωνα. <sup>w</sup> Tres vero facta annis LXXVIII. et mensibus IV. Plin. lib. 36. cap. 12.

concludes,



GREAVES. concludes, \* *Inter omnes eos non constat à quibus factæ sint, justissimo casu oblitteratis tantæ vanitatis authoribus.*

The *Arabians*, whose excellencies I judge to have been in the speculative sciences, and not in the histories and occurrences of ancient times, assign other founders of these three, different from those mentioned by the *Greeks*. The author of the book in titled, *Morat Alzeman*, writes, *They differ concerning him that built the Pyramids: some say Joseph, some say Nimrod, some Dalukah the queen, and some that the Egyptians built them before the flood: for they foresaw, that it would be, and they carried thither their treasures, but it profited them nothing.* In another place he tells us, *That the Coptites (or Egyptians) report, that these two greater Pyramids, and the lesser, which is coloured, are sepulchres. In the east Pyramid is king Saurid, in the west Pyramid his brother Hougib, and in the coloured Pyramid Fazfarinoun the son of Hougib: The Sabæans relate, that one of them is the sepulchre of Shiit, (that is, Seth) and the second the sepulchre of Hermes, and the coloured one the sepulchre of Sab, the son of Hermes, from whom they are called Sabæans. They go in pilgrimage thither, and sacrifice at them a cock, and a black calf, and offer up incense.* Ibn Abd Albokm, another *Arabian*, discoursing of this argument, confesses, that he could not find amongst the learned men in *Egypt*, any certain relation concerning them: (wherefore) *what is more reasonable (saith he) than that the Pyramids were built before the flood? For if they had been built after, there would have been some memory of them amongst men.* At last he concludes, *The greatest part of chronologers affirm, that he which built the Pyramids, was Saurid Ibn Salhouk the king of Egypt, who was before the flood three hundred years.* And this opinion he confirms out of the books of the *Egyptians*. To which he adds, *The Coptites mention in their books, that upon them there is an inscription engraven; the exposition of it in Arabick is this, I Saurid the king built the Pyramids in such and such a time, and finished them in six years; he that comes after me, and says he is equal to me, let him destroy them in six hundred years; and yet it is known, that it is easier to pluck down than to build; and when I had finished them, I covered them with satin, and let him cover them with mats.* The same relation I find in several others

of them, that this *Saurid* was the founder of these three Pyramids, which the admiration of after-times inrolled amongst the miracles of the world. And these are those three, which are still fair and entire, and standing near to one another, formerly not far distant from the great and ancient city *Memphis*, built by *Uchoreus*, (of which there is now not so much as the ruins left) and less distant from the river *Nilus*, as *Diodorus*, *Strabo*, and *Pliny*, rightly describe.

Besides these three, we find mentioned, in *Herodotus* and *Diodorus*, the names and authors of some others, not much inferior to these in magnitude, long since ruined and defaced by time. On the contrary, there are many now standing in the *Libyan* desert, whose names and authors neither *Herodotus* nor *Diodorus*, nor yet any of the ancients, have expressed.

After *Mycerinus*, according to *Herodotus*, (for *Diodorus* is here silent) *Asychis* succeeded in the kingdom, *who, being desirous to excel his predecessors, left for a monument a Pyramid made of bricks, with these words engraven in stone; Compare not me with the Pyramids built of stone, which I as far excel, as Jupiter doth the other gods. For, striking of the bottom of the lake with long poles, and gathering the dirt which stuck to them, they made thence bricks, and formed me in this manner.*

The same author relates, that, many ages after this *Asychis*, *Sanacharib*, king of the *Arabians* and *Assyrians*, who certainly is the same which is mentioned in the Scriptures, having expelled *Sethon* the king of the *Egyptians*, and the priest of *Vulcan*, *the Egyptians, recovering their liberty, made choice of twelve kings, (which is also confirmed by Diodorus) dividing Egypt into so many parts; for they could at no time live without a king; these, by a common consent, built a labyrinth above the lake of Moeris: At the angle where the labyrinth ends, there is a Pyramid of xl Orgyæ, (that is, of ccxl feet) in which are engraven huge resemblances of beasts: the passage to it is underground. And this is that Pyramid, as may evidently be collected out of *Strabo*, in which *Imandes* lies buried, whom we may probably suppose to have been the builder of it. His words are these, *At the end of this building, (that is, of this labyrinth) which contains a furlong in length, there is a certain sepulchre, being a quadrilateral Pyramid,**

\* Plin. l. 36. c. 12.

† Herod. lib. 2.

‡ Οὐχόρεος ἐκτίσας πόλιν Μέμφιν, ἐπιφανέσθην αὐτῷ καὶ Ἀΐσυτον. Diodor. lib. 1.  
 § Ὑπερβαλὺς ὁ βασιλεὺς τῶν ἑβραίων καὶ προτέρων αὐτοῦ βασιλέων θυομένης Αἰγύπτου, μνημόσυνον Πυραμίδα λιπέδω ἐκ πλίνθων ποίησαντα, ἐν τῇ γράμματι ἐν λίθῳ ἐσκευασμένα τὰδε λέγοντα ἔσται. Μὴ με καλονοῦντες πρὸς τὰς λιθίνας Πυραμίδας προέχω γὰρ αὐτῶν τούτων, ὅσον ὁ Ζεὺς αὐτῶν ἄλλων θεῶν· κοινῶς γὰρ ὑποτύποιεν ἐς λίμνην, ὅτι προχοῖτο τὸ πλεῖστον τῶν κοινῶν τούτων συλλέγοντες πλίνθεις εἰρυσαν, καὶ μετὰ τὸν τοιοῦτον ἐξέποιονσαν.

¶ Herod. lib. 2.

\* Strab. lib. 17.

† Diodorus relates, that, over the sepulchre, there was a circle of gold of three hundred and sixty-five cubits compass, and a cubit in thickness, in which the days



mid, each side of which is cccc feet, and the altitude is the same; the name of him that lies buried there is Imandes, whom the author of the epitome calls Maindes, and Strabo himself not long after *Ismandes*; Diodorus names him *Osymanduas*. Which of these two, whether *Herodotus* or *Strabo*, hath given the truest measure of it, unless the Pyramid were now extant, cannot be decided by us; though *Pliny* adheres to the dimensions of *Herodotus*: But whereas *Herodotus* and *Strabo* mention there but one Pyramid, he makes mention of many: and whereas *Strabo* makes this to be quadrilateral, he describes these (if I mistake not his words) to be sexangular. <sup>e</sup> *Superque Nemeses xv ædiculis incluserit Pyramides complures* (that is, above this labyrinth, which he places in *Heracleopolite Nomo*) *quadragenarum ulnarum vi radice muros obtinentes*.

Long before these four Pyramids of *Cheops*, *Cephren*, *Mycerinus*, and *Apychis*, who immediately succeeded one another in the kingdom, but after this of *Ismandes*, *Myris*, as he is called by *Diodorus*, (but *Herodotus*, *Strabo*, and *Pliny*, name him *Mæris*) another Egyptian king, built two admirable Pyramids; the description of which, though in *Herodotus* it immediately follows that of the twelve kings; yet, as it may evidently be collected out of him and *Diodorus*, these two of *Mæris* must, many ages, have preceded. <sup>f</sup> For *Herodotus* tells us, that from *Menes* (the first king of the Egyptians, whom *Diodorus* names *Menas*) the priests recited out of their books cccxxx kings, the last of which was *Mæris*; long after whom reigned *Sesostris*, who is called by *Manethos*, *Sethosis*; and by *Diodorus*, *Sesostris* and *Sesosis*; who, more particularly than *Herodotus*, expresses *Sesostris* to have been <sup>g</sup> seven ages after *Mæris*, and to have reigned long before these twelve kings. The which *Sesostris*, or *Sethosis*, immediately succeeding *Amænothis*, (according to *Manethos* in *Josephus*, as we shall shew in the ensuing discourse) must have been before *Cheops*, *Cephren*, *Mycerinus*, and *Apychis*; and therefore, consequently, that *Mæris* must long have preceded these twelve kings. This *Mæris* undertook

and finished that most admirable lake denominated after his name, as it is testified by *Herodotus*, *Diodorus*, *Strabo*, and *Pliny*. A work the most useful and wonderful, if it be rightly considered, that I think was ever by any man attempted; in the midst of which he erected two Pyramids, the one in memory of himself, the other of his wife, each of them being 100 feet in height; the description of both which, and of his lake, we have in *Herodotus*: the latter we find in *Strabo*, but in none so fully as in <sup>h</sup> *Diodorus*; and therefore I shall relate his words: *Ten schœnes* (that is, 100 furlongs; though *Strabo*, and *Artemidorus* before him, observe a difference of *schœnes* in Egypt) above the city (*Memphis*) *Myris* dug a lake of admirable use, the greatness of which work is incredible. For they relate, that the circumference of it contains 100 100 100 100 furlongs; the depth of it in many places is fifty fathom (that is, two hundred cubits, or three hundred feet). Who, therefore, may not deservedly ask, that shall consider the greatness of the work, how many myriads of men, and in how many years they made it? The common benefit of it, to those that inhabit Egypt, and the wisdom of the king, no man can sufficiently commend. For since the rising of *Nilus* is not always alike, and the country is the more fruitful by the moderateness of this, he digged a lake to receive the superfluity of the water, that neither by the greatness of the inundation unseasonably drowning the country, it should occasion marshes or lakes, or flowing less than it should do, for want of water, it should corrupt the fruits. He therefore cut a ditch from the river to the lake, eighty furlongs long, and three hundred feet in breadth; by which, sometimes receiving in, and sometimes diverting the river, he exhibited a seasonable quantity of water to the husbandmen, the mouth of it sometimes being opened, and sometimes shut, not without much art, and great expences. For he that would open the bars, (or sluices) or shut them, it was necessary, that he spent at the least fifty talents. The lake in this manner benefiting the Egyptians, hath continued to our times; and, from the author of it at this day, is called the lake of *Myris*. The king that digged it, left a place in the midst, in which he built a sepulchre, and two

of the year were inscribed, and divided into a cubit apiece, with a description, according to their nature, of the setting and rising of the stars, and also their operations, after the Egyptian astrologers. They say, this circle was carried away by *Cambyses* and the *Persians*, at what time they conquered Egypt (*Diod. Sicul. lib. 1.*). He which shall seriously consider this, and several other passages in *Herodotus* and *Diodorus*, of the stupendous works of the Egyptians, must needs acknowledge, that for magnificence, if not for art, they far exceeded the Grecians and Romans, even when their empires were at the highest, and most flourishing. And therefore those *admiranda Roma*, collected by *Lipsius*, are scarce to be admired, if compared with some of these. At this day, there is hardly any vast column or obelisk remaining in *Rome*, worthy of note, which hath not anciently been brought thither out of Egypt.

<sup>e</sup> Plin. lib. 36. cap. 13.

<sup>f</sup> Herod. lib. 2. Μῆρα δὲ τέτρων [Μῆρα] κατέλεγον οἱ ἱερεῖς ἐν βίβλῳ ἀλλαν βασιλέων τριηκοσίων καὶ τευκόν[α] ἐνόμα[α] ἑκά[α] αὐτῶν Μοίρις.

<sup>g</sup> Diod. Sic. lib. 1.

<sup>h</sup> Diod. Sic. lib. 1. Ἐπ' αὐτῷ δὲ τὸ πᾶν ἀπὸ δέκα χοίρων λίμνην ἄρυξε τῇ μὲν εὐχρησίᾳ θαυμαστὴν, τῷ δὲ μεγέθει τῶν ἔργων ἀπίστον, &c.



**GREAVES.** *Pyramids, each a furlong in height; the one for himself, the other for his wife, placing upon them two marble statues, sitting on a throne, imagining by these works he should propagate to posterity an immortal memory of his worth. The revenue of the fish of this lake, he gave to his wife for her unguents, and other ornaments; the fishing being worth to her a talent a day: for they report, there are two-and-twenty sorts of fishes in it, and that such a multitude is taken, that those who are perpetually employed in salting them, of which there is a very great number, can hardly dispatch the work. Thus far Diodorus. Which description, as it is much more full than that of Herodotus, so Herodotus hath this memorable observation omitted by Diodorus: <sup>1</sup> That this lake was made by hand, and hollowed, it is apparent, because almost in the midst of it, there stand two Pyramids fifty fathoms above the water, and as many fathoms of the building under water: upon the top of each of which, there is a Colossus of stone sitting upon a throne; so that the Pyramids are an hundred fathoms high. Strabo, I know not by what oversight, omits these two Pyramids; whereas he acknowledges the lake of Mæris, in which they stood, <sup>2</sup> to be admirable, being like a sea for greatness and colour.*

Besides these, which we have handled, and whose founders are upon record in the writings of the ancients, there are many others in the Libyan desert, where it bounds Egypt, of which there is no particular mention extant, either in the Greeks, Latins, or Arabians; unless we shall apply these words of <sup>1</sup> Diodorus to some of them. There are three other Pyramids, each side of which contain two hundred feet: the structure of them, excepting the magnitude, is like to the former (that is, as he there specifies, to those three Pyramids of Chemmis, Cephren, and Mycerinus): these three kings before-mentioned are reported to have erected them for their wives. The bigness of some of these now extant doth well answer the measure assigned by Diodorus: but if these three kings built them for their queens, it may be wondered why they should have placed them so remote from their own sepulchres; or why they should stand at such large and unequal distances of several miles from one another. I find as little satisfaction in <sup>2</sup> Pliny, where he writes, *Multa circa hoc vanitas illorum hominum fuit, vestigiaque complurium inchoatarum ex-*

*tant: una est in Arsinoite Nomo, duæ in Memphi, non procul labyrintho, de quo & ipsi dicemus. For, not telling us the founders of these, he leaves us still in the same darkness; only we may, in general, collect out of him, and likewise out of that ode in Horace,*

*Exegi monumentum ære perennius;  
Regalique situ Pyramidum altius.*

Horat. ode 30. lib. 3.

That they were the works of Egyptian kings; but of which of them, and at what time, we are altogether uncertain. *Regum pecuniæ,* <sup>3</sup> saith Pliny, *otiosa, ac stulta ostentatio.* Of the same opinion is *Leo Africanus*, in his accurate description of Africa, after many years travel in those parts. *Hæc per desertum arenaceum, itur ad Pyramides, nempe ad præcorum Ægypti regum sepulcra, quo in loco Memphin olim extitisse asserunt.* It may be, it was the royal prerogative, and that it was prohibited to private men, how wealthy and potent soever, to be thus intombed: but, without some farther light from the ancients, it would be too great a presumption to determine any thing.

<sup>4</sup> *Lucan*, I know not upon what ground, makes as if the *Ptolemies* had imitated the Egyptian kings in this particular:

*Cum Ptolemæorum manes seriemque pendendam  
Pyramides claudant.*

Surely, if they did, these are none of those: For they would have built them at Alexandria, which was then the regal seat, and not at Memphis, the which, as <sup>5</sup> Diodorus assures us, began to decay after the building of Alexandria, like as the ancient Thebes (as the <sup>6</sup> Grecians stiled it; or the city of the sun, as the Egyptians, according to <sup>7</sup> Diodorus, called it; or Diospolis, as Diodorus and <sup>8</sup> Strabo also name it) did, after the building of Memphis. Those which imagine the monument or sepulchre, mentioned by <sup>9</sup> Plutarch at Alexandria, into which Cleopatra fled for fear of Augustus, to have been a Pyramid, are much deceived. For, in the life of Mark Antony, where he informs us, that there were sepulchres near the temple of Isis, of exquisite workmanship, and very high, into which she conveyed the richest of her treasures, he describes one of them, wherein she hid herself, to have

<sup>1</sup> Herodot. lib. 2. <sup>2</sup> Θαυμαστήν δὲ καὶ τὴν λίμνην ἔχει τὴν Μοίειδ' ὅτι καλεμένην πελαγίαν τῷ μεγέθει, καὶ τῇ χροῇ διακρίσθαι. Strab. lib. 17.  
<sup>3</sup> Diod. Sic. lib. 1. Εἰσὶ δὲ καὶ ἄλλαι τρεῖς Πυραμίδες, ὧν ἑκάστη μὲν πλεονέχον δὴ πλεονέχον ὑπάρχει, τὸ δ' ὅλον ἔρπον παραπλήσιον τῇ καλῶς καλεσθῆναι ταῖς ἄλλαις, πλεονέχον δὲ φασὶ τὰς προσηγομένους τρεῖς βασιλεῖς ταῖς ἰδίαις καλεσθῆναι γυναιξίν. <sup>4</sup> Plin. lib. 36. cap. 12. <sup>5</sup> Ibid. <sup>6</sup> Leo Afric. lib. 8.  
<sup>7</sup> Lucan. lib. 8. <sup>8</sup> Diodor. lib. 1. <sup>9</sup> Plato, & alii. <sup>10</sup> Diodor. lib. 1. <sup>11</sup> Strab. lib. 17.  
<sup>12</sup> Plutarch. in Antonio.

had



had a window above the entrance, by which she drew up with cords the body of *Antony*, and by which afterwards *Proculus* entered, and surprised her. This window is not in any of those Pyramids I have seen; neither can I apprehend, if these were of as solid and massive stones, and of the same shape, as those at *Memphis*, and the chambers within as remote from the outward superficies, of what use it could be, either in

respect of light or ornament; and therefore I conjecture these monuments of the *Ptolemies* to have been of a different structure from those of the Pyramids.

In all other classical authors, I find no mention of the founders of the rest in the *Libyan* desert; and, after such a distance of time, we must be content to be silent with them.

Of the Time in which the PYRAMIDS were built.

TO define the precise time in which these Pyramids were erected, as it is an inquiry of much difficulty, so of much importance, in regulating the various and uncertain traditions of the ancients concerning the *Egyptian* chronology. For if we shall peruse those fragments of *Manethos*, an *Egyptian* priest, preserved by <sup>a</sup> *Josephus*; or those relations of <sup>b</sup> *Herodotus*, of cccxxx kings to *Maris*, from *Menes* the first that reigned in *Egypt* (who probably is <sup>c</sup> *Mizraim*, the second son of *Cham*, and <sup>d</sup> father of the *Egyptians*); or that computation of <sup>e</sup> *Diodorus*, borrowed from their sacred commentaries, that to the clxxx Olympiad, or to the time in which he travelled thither, there had been a succession in the royal throne for xv cix years; or that calculation of <sup>f</sup> *Pomponius Mela*, of cccxxx kings to the time of *Amasis*, continued above xlii cix years; or lastly, those Dynasties mentioned by *Africanus* and *Eusebius*, but pretermitted by *Herodotus* and *Diodorus*; the first of which <sup>g</sup> *Joseph Scaliger* places in the vii cix and ix year of that *Julian* period, which by him is called *periodus Juliana postulatitia*, and the time *tempus prolepticum*, preceding the creation by cix ccc xxxvi years, we shall find ourselves intangled in a labyrinth, and maze of times, out of which we cannot, without much perplexity, unwind ourselves. And if we farther consider, that, amongst those many names delivered by *Manethos*, and preserved by *Josephus*, *Africanus*, *Eusebius*, and *Syn-cellus*, how few there are that concur with those of *Herodotus* and *Diodorus*, or with those in *Plato*, *Strabo*, *Pliny*, *Plutarch*, *Censorinus*, and some others; and that, which is of greater consequence, how difficult it is to reconcile these names and times to the *Egyptian* kings recorded in the Scriptures; we shall find ourselves beset, and, as it were, invironed on every side with great inextricable doubts. What, therefore, in inquiries of this nature, is ap-

proved as the most solid and rational foundation, that is, to find out some common and received *Epocha*, in which either all or most agree, that shall be our guide in matters of so great antiquity. Now, of all the ancient *epochas*, which may conduce to our purpose, there is none that we may safer rely upon, than that of the migration of the *Israelites* out of *Egypt*; which had the same hand faithfully to pen it, that was the most active and miraculous instrument of their departure. And, though profane historians differ much in the manner of this action, either as they were tainted with malice against the *Hebrews*, or misled with the calumnies and false reports of their enemies the *Egyptians*; of whom <sup>h</sup> *Josephus* may seem to have given a true censure, *That all the Egyptians in general are ill-affected to the Jews*; yet all agree in this, that *Moses* was the chief author and conductor of this expedition. If therefore we shall discover the time in which *Moses* flourished, and in which this great enterprize was performed by him, it will follow, by way of consequence, that, knowing what *Pharaoh*, or king in *Egypt*, was coetaneous and concurrent with him, we may by *synchronism*, comparing sacred and profane authors, and following the line of their successions, as it is delivered by good authority, at length fall upon the age in which *Cheops*, and those other kings, reigned in *Egypt*, whom we assigned, out of *Herodotus* and *Diodorus*, to have been the founders of these Pyramids.

And here, for our inquiry, what *Egyptian* king was concurrent with *Moses*, we must have recourse to the relations, not only of the Scriptures, but also of other approved authors amongst the *Jews* and *Gentiles*; in which last, though we often find more than an *Egyptian* darkness, yet sometimes, through this, we may discover some glimmerings of light. By the Scriptures alone, it is impossible to infer, what king of

<sup>a</sup> Joseph. lib. i. contra Apionem.

<sup>b</sup> Herodot. lib. 2.

<sup>c</sup> Gen. x. 6.

<sup>d</sup> Joseph. l. i. Antiq. cap. 7.

<sup>e</sup> Diodor. lib. i.

<sup>f</sup> Trecentos & triginta Reges ante Amasim, & supra tredecim millium annorum aetates, certis annalibus referunt. Pomp. Mela, l. i. c. 9.

<sup>g</sup> Scal. in Eusebii chronico.

<sup>h</sup> Φαίνοισαι ὅδ' ἡ μάλα πρὸς ἡμᾶς δυσμένως διαθήκεται κοινῇ μὲν ἅπαντες Αἰγύπτου. Jos. lib. i. contra Apionem.

Egypt



GREAVES. Egypt was coetaneous with Moses; seeing the name, which is there given him, of Pharaoh, is a common denomination applicable to all of them; much like Caesar or Augustus with the Roman emperors; or some time Cosroe with the Persians; and no distinctive appellation. Yet in Herodotus we find one king, the successor of Sesostris, to have been called Pheron, which I suppose is Pharaoh, and his proper and peculiar name. But who this Pharaoh should be, whose heart God hardened, and upon whom Moses wrought so many wonders, is worth our disquisition. Josephus, in his first book *contra Apionem*, out of Manethos, contends, that Tetmosis (who is termed Amosis by Africanus and Eusebius) reigned then in Egypt. The whole force of his argument lies in this, that Manethos mentions the expulsion of the nation of shepherds to have been by Tetmosis: but the Hebrews were a nation of shepherds: therefore the Hebrews were expelled out of Egypt, or, in the scripture-phrase, departed out of Egypt, under Tetmosis; and consequently, that Moses, who was their conductor, was coetaneous with him. That the Hebrews were a nation of shepherds, and so accounted of themselves, and were esteemed by others, is very perspicuous. <sup>k</sup> And Joseph said unto his brethren, and unto his father's house, I will go up, and shew Pharaoh, and say unto him, My brethren, and my father's house, which were in the land of Canaan, are come unto me: and the men are shepherds; for their trade hath been to feed cattle; and they have brought their flocks, and their herds, and all that they have. And it shall come to pass, when Pharaoh shall call you, and shall say, What is your occupation? that ye shall say, thy servants trade hath been about cattle, from our youth even until now, both we and also our fathers; that ye may dwell in the land of Goshen. For every shepherd is an abomination to the Egyptians. But before we shall disprove this assertion of Josephus, which carries much speciousness with it, and therefore is approved and followed by <sup>l</sup> Tatianus, by <sup>m</sup> Justin Martyr, and by <sup>n</sup> Clemens Alexandrinus, we shall put down the words of Manethos himself, as they are reported by <sup>o</sup> Josephus in his first book *contra Apionem*. Timaus by name being our king, under him, I know not how, God was displeased; and beyond expectation, out of the eastern countries, men of obscure birth encamped themselves in the country; and easily, and without battle, took it by force, binding the princes, and, besides, cruelly burning

the cities, and overthrowing the temples of the gods. Last of all, they made one of themselves a king, who was named Salatis: he, reigning nineteen years, died. After him, another, named Bæon, reigned forty-four years; next to him Apachnas; another, thirty-six years seven months; then Apophis, sixty-one; Janias, fifty, and one month; after all, Assis, forty-nine years and two months. And these were the first six kings of them always conquering, and desiring to extirpate Egypt. Their nation was called Hycsos, that is, kingly shepherds. For hyc, in the sacred tongue, signifies a king; and sos a shepherd, or shepherds, in the common dialect; and thence hycsos is compounded. But some say, that these were Arabians. [In <sup>[These other copies I have found, that, by the denomination hyc, kings are not signified, but on the contrary, captive shepherds. For hyc, in the Egyptian language, when it is pronounced with a broad sound, plainly signifies captives; and this seems more probable to me, and better agreeing to the ancient history.]</sup> These are the words of Josephus, and not of Manethos.] Those kings therefore, which we before mentioned, and those which were called Pastores, and those which descended of them, ruled Egypt five hundred and eleven years. After this, he mentions that by the kings of Thebes, and of the rest of Egypt, there was an invasion made against these shepherds, and a very great and lasting war. The which, he says, were conquered by a king, whose name was Alisfragmuthosis; whereby they lost all Egypt, being shut up into a place containing in circuit ten thousand acres. This space, Manethos says, the shepherds encompassed with a great and strong wall, that they might secure all their substance, and their spoils, in a defensible place. But Themosis, the son of Alisfragmuthosis, endeavouring to take them with four hundred thousand armed men, beleaguer'd the walls, who, despairing to take them by siege, made conditions with them, that they should leave Egypt, and go without any damage whither they would: they, upon this agreement, no less than two hundred and forty thousand, with all their substance, went out of Egypt by the desert into Syria; and, fearing the power of the Assyrians (who then ruled Asia) in that country, which is now called Judæa, they built a city capable to receive so many myriads of men, naming it Hierusalem.

By way of answer to Josephus, we say, that though the Israelites might properly be called shepherds, yet it cannot hence be infer'd out of Manethos, that these shepherds were Israelites. Nay, if we compare this relation of Manethos, with that in Exodus, which <sup>p</sup> Josephus, being a Jew,

<sup>l</sup> Σεσωρίδης ὁ τελευτήσαντος ἐκδὲξατο ἑλεγον τὴν βασιλείαν τὸν παῖδα αὐτοῦ Φέροντα. Herodot. l. 2.

<sup>k</sup> Gen. xlv. 31, 32, &c.

<sup>n</sup> Lib. 1. Stromatum,

<sup>p</sup> Exod. i.

<sup>l</sup> In Oratione contra Græcos.

<sup>m</sup> In Parænetico ad eosdem.

<sup>o</sup> Joseph. lib. 1. contra Apion. Ἐγένετο βασιλεὺς ἡμῖν Τίμας Ἰσραήλ, &c.

cannot



cannot but approve of, we shall find the contrary. For there they live under a heavy slavery and persecution, whereas here they are the persecutors and afflictors; there they groan under their task-masters the Egyptians, here they make all Egypt to groan under them. Lastly, whereas there they are employed in the lowest offices, and in mortar, and in brick, and in all manner of service in the field; here, after the destruction of many cities, and men, and infinite outrages committed upon the Egyptians, they make one of themselves a king, and for six descents keep themselves in possession of the royal throne, of which, after a long and bloody war, they are deprived. Their building likewise of a city in Judæa, and naming it Jerusalem, according to Manethos, is a strong argument against Josephus, that these shepherds could not have been the Israelites. For before the entrance of the Israelites into Canaan, we find that Jerusalem was a fort of the Jebusites upon mount Sion, unconquered by Joshua<sup>r</sup>. As for the Jebusites, the inhabitants of Jerusalem, the children of Israel could not drive them out. But they were long after subdued by David. And David and all Israel went to Jerusalem, which is Jebus, where the Jebusites were the inhabitants of the land. And the inhabitants of Jebus said to David, Thou shalt not come hither. Nevertheless, David took the castle of Zion, which is the city of David. Besides all this, the history and chronology of those ancient times, if we compare sacred and profane authors, will in no sort admit, that these shepherds must have been the Israelites. For if these that departed out of Egypt in the reign of Tethmosis, king of Thebais, or of the upper part of Egypt, were the children of Israel, then must Moses their conductor have been as ancient as Tethmosis, or Amosis, that is, as ancient as Inachus, the first king of the Argives. For Apion, in his fourth book of the histories of Egypt, shews out of Ptolemæus Mendesium, an Egyptian priest, that this Amosis lived in the time of Inachus, as it is recorded by Tatianus,<sup>u</sup> Justin Martyr,<sup>x</sup> Clemens Alexandrinus, and others. Eusebius, tho' he doth not approve of it, for he places Moses in the time of Cecrops, yet he assures us, that it was a received opinion among many learned men, <sup>z</sup> Moïsen Inachi fuisse temporibus eruditissimi viri tradiderunt ex nostris Clemens, & Africanus; ex Judæis, Josephus, & Justus, veteris historiæ monumenta replicantes. Now Inachus, according to<sup>a</sup> Castor

an ancient chronographer, with whom Eusebius also concurs, began to reign a thousand and eighty years before the first olympiad, that is, 610 CCLXVIII before the destruction of the temple under Zedekiah, and before Christ's nativity, after the Dionysian or common account, 610 CCCCCLVI. That of the olympiads is so assured an epocha, and so strongly and clearly proved by eclipses of the sun and moon, which are the best demonstrations in chronology, these being expressed by some of the ancients to have happen'd in such a year of such an olympiad, as by<sup>b</sup> Ptolemy; others in such a year of the epocha of Nabonassar, that we cannot err in our calculations an hour, much less an intire day. By this therefore we shall fix the time of Zedekiah, and the destruction of the temple: and consequently, if, by our continuation of the years mentioned in the sacred story, it shall appear, that from the time of Moses, either to the first olympiad, or to Zedekiah, and the destruction of the temple, there cannot be so great a distance as these suppose, we may safely then conclude, that Moses lived not in the time of this Tethmosis, and is not so ancient as Josephus makes him; and that these shepherds were not the Israelites, but very probably Arabians, as Manethos here also reports. Some say that these were Arabians; who to this day, for the greatest part, like the Nomades, wander up and down, feeding their cattle, and often make incursions upon the Egyptians and Syrians. Which occasioned Sesostris the great (as we find it in<sup>c</sup> Diodorus) to make a wall on the east side of Egypt, a thousand and fifty furlongs in length, from Pelusium by the desert to Heliopolis, against the inroads of the Syrians and Arabians: as at this day the Chinese have done against the irruptions of the Tartars on the north and west parts of China, for many hundred miles, the which appears by a large map of mine of that country, made and printed in China. On the contrary, if the succession of times from Moses, recorded in the holy writ, better agrees with the age of Amenophis, the father of Ramesses, whose story<sup>d</sup> Josephus hath preserved out of Manethos, and whose time and rank in the Dynasties, Africanus and Eusebius deliver out of the same Manethos, we may with more probability affirm, that the migration of the Israelites, and time of Moses, was when Amenophis was Pharaoh, or king of Egypt, than that it was when Tethmosis reigned, as Josephus and others contend, out of a desire to make Moses ancients than in truth he is.

GREAVES.

<sup>r</sup> Exod. i. 14.<sup>s</sup> Josh. xv. 63.<sup>t</sup> 2 Chron. xi. 4, 5.<sup>u</sup> In Oratione contra Græcos.<sup>v</sup> In Pa-

rænetico ad Græcos.

<sup>x</sup> Lib. 1. Strom.<sup>y</sup> And so doth St. Augustin: Eduxit Moïses ex Ægypto populum Dei novissimo tempore Cecropis, Atheniensium regis.

L. 18. c. 11. de Civ. Dei.

<sup>z</sup> Euseb.

Chron.

<sup>a</sup> Ibid.<sup>b</sup> Ptolemæus ἐν μεσάλλῃ συντάξει.<sup>c</sup> Diod. Sic. lib. 1.<sup>d</sup> Joseph. lib. 1.

contra Apionem.



GREAVES.

And tho' this argument from the series and successions of time is so demonstrative and conclusive, that nothing can be opposed against it, and therefore might be sufficient to evince our purpose: yet if we considerately examine another relation of *Manethos*, (which is slighted and depressed by *Josephus*, because it made not for his purpose) it must necessarily be, that by those shepherds he meant not the *Israelites*, but rather by the *Israelites* the leprous people, which in his computation are three hundred thirty years and six months after the Dynasty of the shepherds. And therefore we may oppose the authority of *Manethos* against himself, or rather against *Josephus*. The sum of whose discourse is this, That *Amenophis*, who was a great worshipper of the gods, as *Orus* one of the former kings had been, being desirous to see the gods, one of the priests, of the same name with him, told him he might, if he cleansed the country of leprous and polluted people. This leprous people chose for their captain one of the priests of *Heliopolis*, named *Osarsiphus*, who, changing his name, was called *Moses*. He, causing *Amenophis* for fear to fly into *Ethiopia*, was afterwards by him, and by his Son *Sethon*, who was also called *Rameses*, by the name of his father, overthrown in battle, and the leprous people were pursued by them unto the confines of *Syria*. Thus far out of *Manethos*. Here, which is very remarkable, we have expressly the name of *Moses*; whereas in the former relation of *Manethos* there is no mention of him, but of six other kings, with their peculiar names; whereas it is not probable he would have omitted the name of *Moses*, if he had lived in that age, being a name so famous, and so well known to them; and by *Josephus* acknowledged, that the Egyptians accounted him to be an admirable and divine man. The pursuing of them unto the confines of *Syria*, doth very well intimate the following of the *Israelites* by *Pharaoh* and his host. For his terming them a leprous and polluted people, we must consider him to have been an Egyptian, and therefore not unlikely to throw as many aspersions as he could upon the *Israelites*, whom they deadly hated; it may be, out of memory of their former plagues.

However it were, *Chæremón* hath almost the same history, as *Josephus* confesses. *Chæremón*, professing to write the history of *Egypt*, says, That under *Amenophis*, and his son *Rameses*, Two hundred and fifty thousand leprous and polluted men were cast out of *Egypt*. Their leaders were *Moses* the scribe, and *Josephus*, who was also a sacred scribe. The Egyptian name of *Moses* was *Tisithen*, of *Joseph* *Peteseeph*. These coming to *Pelusium*, and finding there three hundred and eighty thousand men left by *Amenophis*, which he would not admit into *Egypt*, making a league with them, they undertook an expedition against *Egypt*. Upon this *Amenophis* flies into *Ethiopia*, and his son *Messenus* drives out the Jews into *Syria*, in number about two hundred thousand, and receives his father *Amenophis* out of *Ethiopia*. I know *Lyfimachus* assigns another king, and another time, in which *Moses* led the *Israelites* out of *Egypt*; and that was, when *Bocchoris* reigned in *Egypt*, the nation of the Jews, being infected with leprosy, and scabs, and other diseases, betook themselves to the temple to beg their living; many being tainted with the disease, there happened a death in *Egypt*. Whereupon *Bocchoris*, consulting with the oracle of *Ammon*, received answer, That the leprous people were to be drowned in the sea in sheets of lead; the scabbed were to be carried into the wilderness; who, choosing *Moses* for their leader, conquered that country, which is now called *Judæa*. Out of which relation of *Lyfimachus*, and some others of like credit, *Tacitus* may have borrowed his in the fifth book of his histories. Most authors agree, that there arising a contagion in *Egypt*, which defiled their bodies, king *Bocchoris*, consulting the oracle of *Hammon* for remedy, was bid to purge his kingdom, and to carry that sort of men, as hated of the gods, into other countries. Thence the vulgar sort being inquired after, and collected together, after they had been left in the deserts, the rest being heavy with tears, *Moses*, one of the banished men, admonished them, not to expect the help either of gods or men, being deserted by both, but that they should trust to him as their captain sent from heaven, to whose assistance by their giving credit at the first, they had overcome their present calamities.

<sup>c</sup> *Manethos* apud *Joseph.* lib. 1. contra *Apionem*.

καὶ θεῶν νομίζουσι. *Joseph.* lib. 1. contra *Apionem*.

<sup>e</sup> Lib. 1. contra *Apionem*. Χαίρει μὲν] καὶ γὰρ ἔτος Αἰγυπτιακὴν φάσκων ἰσοεῖαν συγχεῖν, καὶ προσθεῖς ταὐτὸ ὄνομα τῷ βασιλεῶς, ὅπερ ὁ Μανέθως Ἀμένωφιν, τὸ καὶ τὸν υἱὸν αὐτοῦ Παμέσσιν, &c.

<sup>h</sup> *Lyfimachus* apud *Joseph.* lib. 1. contra *Apionem*. Ἐπὶ Βουχόρεως τῷ Αἰγυπτίῳ βασιλεῶς τὸν λαὸν τῶν Ἰουδαίων λεπροῦς ὄντας καὶ ψωροῦς, καὶ ἄλλα νοσήματα τινὰ ἔχοντας, εἰς τὰ ἱερὰ καταφεύγοντας μεταστῆν τεσσάρην, &c.

<sup>h</sup> *Tacit.* l. 5. Hist. Plurimi auctores consentiunt, ortā per Ægyptum tabe qua corpora fœdaret, regem *Bocchorim*, adito *Hammonis* oraculo, remedium petentem, purgare regnum, &c. id genus hominum ut invisum deis alias in terras avehere jussim. Sic conquisitum collectumque vulgus, postquam vastis locis relictum sit, ceteris per lachrymas torpentibus, *Mosen* unum exulum monuisse, ne quam deorum hominumve spem expectarent ab utrisque deserti, sed sibi met ut duci cœlesti crederent, primò cujus auxilio credentes presentes miseras populi essent. Assensere, atque omnium ignarè fortuitum iter incipiunt.



mities. They assented unto him, and, being ignorant of all, they begin their journey as fortune should lead them. Thus much and more hath Tacitus of Moses and the Jews. But, to pass by his and Lyfimachus's calumnies, we can no more assent to these testimonies of theirs, that Moses lived in the time of Bocchoris, than we did to Josephus, that he was coetaneous with Tethmosis. For we find Bocchoris to be placed by Africanus and <sup>k</sup> Eusebius, both following Manethos, in the twenty-fourth Dynasty, and by <sup>l</sup> Diodorus long after Sesostris the great, or Rameffes; which Rameffes, or Sethosis, or Setbon, (that is, Sesostris, and Sesoosis in Diodorus) both in Manethos and Chæremon, is the son of Amenophis, who is the last king of the eighteenth Dynasty, according to Africanus and Eusebius. I purposely omit the opinion of <sup>m</sup> Apion, that Moses (whom he makes to be of Heliopolis) departed with these lepers, and blind, and lame, in the first year of the seventh olympiad, in which year, faith he, the Phœnicians built Carthage; and that other of <sup>n</sup> Porphyrius, in his fourth book against the Christians, that Moses was before Semiramis: where he places him as much too high, as Apion doth too low.

Laying therefore aside these vain and uncertain traditions, we have no more assured way exactly to fix the time of Moses, and by Moses the time in which the Pyramids were built, than to have recourse to the sacred Scriptures, and sometimes to compare such authors of the Gentiles with these, against whom we have no just exceptions. For by those, and these conjointly, we may continue his time to the first olympiad, and thence to the destruction of the temple by Nebuchadnezzar, king of Babylon; that of the olympiads being a most certain and known epocha with the Greeks, as that of the destruction of the temple with the Jews. From Moses then, or the migration of the Israelites out of Egypt, to the building of Solomon's temple, are cccclxxx years current, or

four hundred seventy-nine complete; and so also <sup>o</sup> Eusebius computes them. The words of the text plainly conclude this sum: <sup>p</sup> And it came to pass in the four hundred and fourty score year, after the children of Israel were come out of the land of Egypt, in the fourth year of Solomon's reign over Israel, in the month Zif, which is the second month, that he began to build the house of the LORD. From the building of the temple to the destruction of it in the reign of Zedekias, by the calculation and confession of the best chronologers, are betwixt four hundred and twenty and four hundred and thirty years. Which is thus deduced: After the first foundation of the temple, Solomon reigned <sup>q</sup> thirty-seven years, <sup>r</sup> Rehoboam with <sup>s</sup> Abia twenty; in whose time we are to place Shishak, or Sesochohis, the king of Egypt. <sup>t</sup> And it came to pass in the fifth year of king Rehoboam, that Shishak, king of Egypt, came up against Jerusalem; and he took away the treasures of the house of the Lord, and the treasures of the king's house, he even took away all; and he took away all the shields of gold which Solomon had made. This Shishak is named by the Septuagint Σεσακ, by St. Hierom Sefac, and is the same whom <sup>u</sup> Josephus calls Σεσακ, which he imagines to have been Sesostris the great, whose victories and conquests are describ'd at large by <sup>v</sup> Herodotus. But this Sesostris, or <sup>x</sup> Sesoosis, as Diodorus also terms him, must long have preceded Rehoboam's time, as in the sequel of this discourse it will appear. Therefore the more probable opinion is that of Scaliger, that by Shishak is meant Sesochohis, whom Manethos calls Σεσοχης, and the scholiast of Apollonius Σεσοχοις. the time of the twenty-second Dynasty, in which we find him placed by Africanus and Eusebius, doth well agree with it, and the radical letters in Shishak, Sefac, and Σεσοχης, being the same, do very much strengthen our assertion. After Rehoboam and Abiah's reign, <sup>y</sup> Asah and <sup>z</sup> Jehoshaphat reigned LXVI years, <sup>a</sup> Joram and <sup>b</sup> Abazia IX, <sup>c</sup> Athalia and <sup>d</sup> Joas XLVI, <sup>e</sup> Amazias XXIX, <sup>f</sup> Uzziab LII, <sup>g</sup> Jotham XVI, <sup>h</sup> Abaz

<sup>k</sup> Ex edit. Jos. Scaligeri.

<sup>l</sup> Diod. lib. 1.

<sup>m</sup> Apud Jos. lib. 2. contra Apionem.

<sup>n</sup> Ex Ethnicis verò impius ille Porphyrius, in quarto operis sui libro, quod adversum nos casso labore contexuit, post Moysen Semiramim fuisse affirmat. Euseb. Chron.

<sup>o</sup> Ibid.

<sup>p</sup> 1 Kings vi. 1.

<sup>q</sup> For 1 Kings vi. 1. In the fourth year of his reign, and in the second month, he began to build the house of the Lord. And in 1 Kings xi. 42. The time that Solomon reigned in Jerusalem over Israel was forty years. Out of which if we subduct three complete years that preceded the foundation of the temple, there remain thirty-seven years.

<sup>r</sup> 1 Kings xiv. 21. He reigned seventeen years in Jerusalem.

<sup>s</sup> 1 Kings xv. 2. Three years reigned he in Jerusalem.

<sup>t</sup> 1 Kings xiv. 25, 26.

<sup>u</sup> Joseph. Antiq. l. 8. c. 4.

<sup>v</sup> Herod. lib. 4.

<sup>x</sup> Diodorus, in the printed copies, always names him Sesoosis; but in one of the MSS. as Henr. Stephanus observes, he is sometimes called Sesostris, and sometimes Sesoosis. Vid. edit. Diod. ab Henr. Stephan.

<sup>y</sup> 1 Kings xv. 10. Forty-one years reigned he in Jerusalem.

<sup>z</sup> 1 Kings xxii. 42. He reigned twenty-five years in Jerusalem.

<sup>a</sup> 2 Kings viii. 17. He reigned eight years in Jerusalem.

<sup>b</sup> 2 Kings xi. 3. And he was with her hid in the house of the Lord six years; and Athaliah did reign over the land.

<sup>c</sup> 2 Kings xii. 1. Forty years reigned he in Jerusalem.

<sup>d</sup> 2 Kings xiv. 2. He reigned twenty-nine years in Jerusalem.

<sup>e</sup> 2 Kings xv. 2. He reigned fifty-two years in Jerusalem.

<sup>f</sup> 2 Kings xv. 33. He reigned sixteen years in Jerusalem.

<sup>g</sup> 2 Kings xvi. 2.



<sup>GREAVES</sup> xvi, being contemporary with *Hoshea* the last king of *Israel*, in whose time we find *So* to reign in *Egypt* (2 Kings xvii. 4.). After *Abaz* succeeded *Hezekiah*, reigning <sup>1</sup> xxix years.

Now <sup>k</sup> in the fourteenth year of king *Hezekiah*, did *Sennacherib*, king of *Assyria*, come up against all the fenced cities of *Judah*, and took them. But afterwards, when he came to besiege *Jerusalem*—<sup>l</sup> It came to pass that night, that the angel of the *LORD* went out, and smote in the camp of the *Assyrians* an hundred fourscore and five thousand; and when they arose early in the morning, behold, they were all dead corpses. So *Sennacherib* king of *Assyria* departed, and went, and returned and dwelt at *Nineveh*. In the time of this *Sennacherib*, *Sethon*, succeeding *Anyfis*, reigned in *Egypt*, according to <sup>m</sup> *Herodotus*, who, in his *Euterpe*, hath plainly the name of *Sanacharib*, stiling him king of the *Arabians* and *Assyrians*, and making him to have received a miraculous defeat, which, it may be, was that of *Hezekiah*, though he applies it to *Sethon* king of the *Egyptians*. His story is well worth our observation; which runs thus: <sup>n</sup> After this (*Anyfis*), the priest of *Vulcan*, by name *Sethon*, reigned; who abusing the men of war of the *Egyptians*, and contemning them as not useful to him, besides other ignominies, he deprived them of their lands, which had been given to every company of twelve, by the former kings. Whence it happened, that when, afterwards, *Sanacharib*, the king of the *Arabians* and *Assyrians*, invaded *Egypt*, the *Egyptian* soldiers refused to assist him. Then the priest, destitute of counsel, shut himself up, lamenting before the image, how much he was in danger to suffer. In the midst of his mourning, falling asleep, a God appeared to him, encouraging him, that he should suffer no distress, if he would march against the armies of the *Arabians*; for he would send him succour.

He, therefore, giving credit to this dream, taking with him such volunteers of the *Egyptians* as followed him, pitched his army at *Pelusium*; for there *Egypt* is easiest invaded: neither did any of the soldiers follow him, but tradesmen, and artificers, and merchants. Coming thither by night, an infinite number of mice, entering upon his enemies, gnawed their quivers and bows, and the leathers of their shields; so that, the next day, the enemies, destitute of arms, fled, many of them being slain. And, therefore, now this king stands in the temple of *Vulcan*, in a statue of marble, holding in his hand a mouse, with this inscription: He that looks upon me, let him be religious. After *Hezekiah*, <sup>o</sup> *Manasses* reigned <sup>p</sup> lv years, <sup>q</sup> *Amon* <sup>r</sup> ii, <sup>s</sup> *Josiah* <sup>t</sup> xxxi. <sup>u</sup> In his days, *Pharaoh* *Nechoh*, king of *Egypt*, went up against the king of *Assyria*, to the river *Euphrates*; and king *Josiah* went against him; and he slew him at *Megiddo*, when he had seen him. The same relation we read in *Herodotus*, if we pardon him the mistake of *Magdolo* for *Megiddo*, who writes, that <sup>v</sup> *Necus*, (the king of *Egypt*) fighting a battle on land with the *Syrians* in *Magdolo*, obtained the victory; and, after the fight, he took *Cadytus*, a great city in *Syria*.

Next to *Josiah*, succeeded <sup>w</sup> *Joachaz*, <sup>x</sup> *Jehoiakim*, and <sup>y</sup> *Jechoniah* or *Jehoiakim*, reigning eleven years and six months. And in the eleventh year of <sup>z</sup> *Zedekiah*, the next king after *Jechoniah*, was the temple burnt by *Nebuzaradan*, in the <sup>1</sup> nineteenth year of *Nebuchadnezzar* king of *Babylon*, or the second of *Vaphres* king of *Egypt*, in the computation of *Clemens Alexandrinus*. This *Zedekiah*, saith <sup>2</sup> *Josephus*, having been a confederate of the *Babylonians* for eight years, broke his faith with them; and, joining league with the *Egyptians*, hoped to overthrow the *Babylonians*. This league we find intimated in <sup>3</sup> *Ezekiel*; and we read, in <sup>4</sup> *Jeremiah* and <sup>5</sup> *Josephus*, of succours

<sup>1</sup> 2 Kings xviii. 2. He reigned twenty-nine years in *Jerusalem*.

<sup>2</sup> 2 Kings xix. 35, 36.

<sup>3</sup> *Herod. lib. 2. Σανναχάρηος λαῶσαι τὸν ἱερεῖα τῶ Ἡφαίστου, τὸ ἄνομα εἶναι Σεθὼν, &c.*

<sup>4</sup> 2 Kings xxii. 19. He reigned two years in *Jerusalem*.

<sup>5</sup> 2 Kings xxiii. 29. and 2 Chron. xxxv. 20. *Necho*, king of *Egypt*, came up to fight against *Carchemish*, by *Euphrates*; and *Josiah* went out against him.

<sup>6</sup> Καὶ Σύροισι περὶ ὃ Νεκὼς συμβαλὼν ἐν Μασδὼλῳ ἐνίκησε· μετὰ δὲ τὴν μάχην Κάδυσον πόλιν τῆς Συρίας ἔρυσαν μεγάλην εἴλε. *Herod. lib. 2.*

<sup>7</sup> 2 Kings xxiii. 36. He reigned eleven years in *Jerusalem*.

<sup>8</sup> three months.

<sup>9</sup> And the city was besieged unto the eleventh year of king *Zedekiah*. And on the ninth day of the fourth month, the famine prevailed in the city, and there was no bread for the people of the land; and the city was broken up, and all the men of war fled by night.

<sup>10</sup> And in the fifth month, on the seventh day of the month, (which is the nineteenth year of *Nebuchadnezzar*, king of *Babylon*) came *Nebuzaradan*, captain of the guard, a servant of the king of *Babylon*, unto *Jerusalem*. And he burnt the house of the *LORD*, and the king's house, and all the houses of *Jerusalem*, and every great man's house burnt he with fire, 2 Kings xxv. 2, 3, 4, 8, 9. The same relation we find in *Jeremiah*, chap. lii. ver. 5, 6, 7, 12, 13. almost word for word, which is remarkable.

<sup>11</sup> *Joseph. antiquit. lib. 10. cap. 10. Τὴν συμμαχίαν καὶ τὴν πρὸς τὰς Βαβυλωνίους ἐπὶ ἔτη ὀκτὼ καὶ σαχῶν, δέλευσεν τὰς πρὸς αὐτοὺς πίσεις, καὶ τοῖς Αἰγυπτίοις προσέθετο, καὶ ἀλάσειεν τὰς Βαβυλωνίους ἡλπίσας.*

<sup>12</sup> *Ezek. xvii. 15.*

<sup>13</sup> *Jer. xxxvii. 5.*

<sup>14</sup> *Jos. Ant. l. 10. c. 10. Ὁ δὲ Αἰγύπτιος ἀκύσας ἐν οἷς ἐστὶν ὁ σύμμαχος αὐτοῦ Σεδεκίας, ἀναλαβὼν πολλὴν δύναμιν, ἤκεν εἰς τὴν Ἰερουσαλήμ, ὡς λύσων τὴν πολιορκίαν.*

and



and assistance sent by the king of Egypt, when Zedekiah and Jerusalem were first distressed by the Chaldeans, or forces of the king of Babylon. <sup>a</sup> Then Pharaoh's army was come forth out of Egypt; and when the Chaldeans, that besieged Jerusalem, heard tidings of them, they departed from Jerusalem. The same is reiterated by him: Behold, Pharaoh's army, which is come forth to help you, shall return to Egypt, to their own land. And the Chaldeans shall come again, and fight against this city, and take it, and burn it with fire. All which, we see, was performed by Nebuchadnezzar, in the eleventh year of Zedekiah; and a judgment also denounced against the king of Egypt. <sup>c</sup> Thus saith the LORD, Behold, I will give Pharaoh Hophra, king of Egypt, into the hands of his enemies, and into the hand of them that seek his life; as I gave Zedekiah, king of Judah, into the hand of Nebuchadnezzar, king of Babylon, his enemy, and that sought his life. The same is often threatened by the prophet <sup>d</sup> Ezekiel, who lived in the time of Hezekiah, as Jeremiah did: I am against Pharaoh, king of Egypt; and I will scatter the Egyptians among the nations, and will disperse them throughout the countries: and I will strengthen the arms of the king of Babylon, and put my sword in his hand; but I will break Pharaoh's arms. Which prophecies we may discover most manifestly to have been fulfilled in the reign of Apries, as <sup>e</sup> Herodotus names him; or Apbries, as <sup>f</sup> Diodorus calls him; or Vaphres, as the Septuagint and Eusebius render the name of that king, which here, in Jeremiah, is called Pharaoh Hophra; who, saith <sup>g</sup> Herodotus, next to Psammitichus his grandfather, was the most fortunate of all the former kings, for twenty-five years of his reign; which might occasion Zedekiah to fly to him for succour: but the Egyptians rebelling against him, he was overthrown in battle, taken prisoner, and afterwards strangled by his own servant Amasis, whom they had made their king. The whole story and manner is at large in <sup>h</sup> Herodotus: neither did divine vengeance long forbear to pursue the traitor. For Cambyſes, the king of the Persians and of Babylon, coming with an army against him, possessed himself of Egypt, as the prophets had foretold. Nor could the Egyptians ever, to this day, recover the monarchy. For, after the Persians, succeeded the Macedonians; after them, the Romans; then the Arabians; next, the Mamalukes or Circassians; and, last of all, the Turks or Scy-

thians. So that we may conclude from the occurrences then happening, (the relations of Herodotus exactly agreeing with the threatenings of the prophets) as also from the computation of times, and from the affinity and analogy of names, that Hophra and Apries, or Vaphres, must have been the very same Egyptian king coetaneous and concurrent with Zedekiah.

To reassume then what hath been demonstrated by us: From the migration of the Israelites out of Egypt, under the conduct of Moses, to the building of Solomon's temple, are four hundred seventy-nine years complete; and, from the building of the temple to the destruction of it, are four hundred and thirty years, and six months. But, because it is not probable, that, amongst so many kings, all of them should have reigned completely so many years as are expressed in the text; it being the usual stile of kings to reckon the years current of their reign as complete, I shall limit this uncertainty between cccxx and cccxxx years, which is a sufficient latitude. If any one should desire a more exact calculation, he may compute them, by comparing other places of the Scriptures with these, to be but cccxxv years current, according to the opinion of the most reverend and judicious primate of Ireland, to which I willingly subscribe; though either computation be sufficient for my purpose.

This destruction of the temple, by our best chronographers, is placed in the first year of the forty eighth olympiad, and in the hundred and sixtieth of the epocha of Nabonassar, and in the nineteenth (as the Scripture often makes mention) of Nebuchodonosor the son of Nabonassar, (as <sup>i</sup> Berosus in Josephus names him) which Nabonassar must necessarily be the same with him that is called Nabopolassar in Ptolemy, (the xiv king of the Babylonians after Nabonassar) whom Nabopolassar (or <sup>m</sup> Nabuchodonosor, or <sup>n</sup> Nebuchadnezzar, or <sup>o</sup> Nebuchadnezzar, as the Scripture also terms him) in his Canon Regnorum succeeds. The nearness of the names, and agreement of the times from Cyrus, in whom the sacred Scriptures and profane authors equally concur, do strongly prove them to be the same. Wherefore we may conclude, that from the time of Moses, or the migration of the Israelites out of Egypt, or from the end of Amenophis, (coetaneous with Moses) the last king of the eighteenth Dynasty, (as Eusebius out of Manethos ranks him) to the

<sup>a</sup> Jer. xxxvii. 6, 8.

<sup>c</sup> Jer. xlv. 30.

<sup>d</sup> Ezek. xxx. 22, 23.

<sup>e</sup> Herod. l. 2.

<sup>f</sup> Diodor. lib. 1.

<sup>g</sup> Ος μετὰ Ψαμμίτιχον τὸν ἐαυτοῦ προπάτορα ἐγένετο ἐνδαιμονέστατος τῶν περὶ τὸν βασιλῆα ἐπ' ἑτέρα πέντε καὶ εἰκοσι ἔτη. Herod. l. 2.

<sup>h</sup> Herodot. lib. 2.

<sup>i</sup> Ναβουχοδονόσορος ὁ παῖς αὐτοῦ Ναβουπόλσσαρος. Beros. apud Joseph. l. 1. contra Apionem.

<sup>m</sup> So Josephus, and the Vulgata, always name him.

<sup>n</sup> Jer. liii. 18, 29.

<sup>o</sup> 2 Kings xxv. 8. Ezra i. 7. ii. 1.

N<sup>o</sup> 81. VOL. II.

7 T

reign







Secondly, *Cephren* or *Chabryis*, the builder of the second, who reigned fifty-<sup>u</sup> six years.

Thirdly, *Mycerinus*, the erecter of the third, seven years.

Fourthly, *Apychis*, the author of the fourth.

Fifthly, *Anyfis* the blind.

How long these two reigned, is nowhere expressed.

Sixthly, *Sabachus* the *Ethiopian*. He conquered *Egypt*, and reigned <sup>x</sup> fifty years.

The sum is CLXIII years, this being subducted out of CLXXVIII years, (the whole time allowed by *Eusebius* to this *Dynasty*) the remainder is xv years; which space we may, without any inconvenience, divide between *Apychis* and *Anyfis*.

If any shall question why the names of these kings are omitted by *Manethos*, an *Egyptian* priest, in the xx *Dynasty*, I can give no other reason than what we read in *Herodotus*: <sup>γ</sup> *These kings* (speaking of *Cheops* and *Cephren*) *the Egyptians out of hatred will not so much as name; but they call them the Pyramids of Philition a shepherd, who in those times, at that place, fed his cattle.* The which hatred, occasioned by their oppressions, as <sup>z</sup> *Diodorus* also mentions, might cause him to omit the rest, especially *Sabachus* an *Ethiopian*, and an usurper.

Following this computation of *Eusebius*, of CLXXVIII years for the xx *Dynasty*, and not that of *Africanus*, who assigns only an cxxv, of whom <sup>a</sup> *Joseph Scaliger* hath this censure; *In istis Dynastis, aliquid turbasse videtur Africanus, ut consuleret rationibus suis*; it will follow, by way of consequence, as the most reverend and learned primate of Ireland, in his *Chronologia Sacra*, hath singularly well observed,

First, That the xviii *Dynasty* ends with the migration of the *Israelites* out of *Egypt*, and with the death of *Amenophis*; which is clearly signified by *Manethos*,

and the times of *Belus* and *Danaus*, noted by the Greek chronographers, do evidently confirm it, I mean the *Egyptian Belus* or *Amenophis*, the father of *Aegyptus*, or *Sethosis* and *Danaus*; not the *Babylonian Belus*, the father of *Ninus*, whom *Mythologists* confound with this, feigning him to have transported colonies out of *Egypt* to *Babylon*. The time allotted by <sup>b</sup> *Thallus*, an ancient chronographer, to *Belus*, of ccc xx years before the *Trojan* war, doth exactly agree with this *Egyptian Belus* or *Amenophis*.

Secondly, That the xx *Dynasty* will receive those six kings, which, out of *Herodotus*, we have placed there; the number of whole years exceed the time limited by *Africanus*.

Thirdly, That the xxii *Dynasty* will fall upon the latter time of king *Solomon*, whereby *Sefonchis*, the first king of it, may be the same with *Sefac* or *Shishac*, who in the fifth <sup>c</sup> year of *Rehoboam*, the son of *Solomon*, invaded *Judea*; which was the only reason that moved <sup>d</sup> *Scaliger* to suspect, that something had been altered by *Africanus* in these *Dynasties*.

By the same series and deduction of times, we may conclude, that the labyrinth adjoining to the Pyramid of *Osymanduas*, raised by a common expence of the xii kings, who <sup>e</sup> succeeded *Sethon*, to have been cto cto cccxxiv years since, 10 clxxx before Christ. For *Sethon* living in the time of *Sennacharib*, and these immediately following *Sethon* in the government of the kingdom, they must have reigned either in the same age the Scripture assigns to *Sennacharib*, or not long after.

Those other Pyramids, the one of *Osymanduas* in <sup>f</sup> *Diodorus*, or *Ismandes*, in <sup>g</sup> *Strabo*; and those two of *Mæris*, or *Myris*, in <sup>h</sup> *Herodotus*, and <sup>i</sup> *Diodorus*; it is evident they preceded *Sesostris* the great, and must therefore have been above three thousand years since; but by how many kings, or how many ages, is hard to be defined.

<sup>a</sup> Herod. lib. 2. Diodor. lib. 1.

<sup>x</sup> Ibid.

<sup>γ</sup> ὀνομαζέται, ἀλλὰ καὶ τὰς πυραμίδας καλέουσι ποιμένος τὰ χωρία. Herodot. lib. 2.

<sup>z</sup> Diodor. lib. 1.

<sup>b</sup> Thallus apud Euseb.

<sup>c</sup> 1 Kings xiv. 25, 26.

<sup>γ</sup> Τέτρες ὑπὸ μίσεος ἡ καρπία δέλεσι Αἰγυπτίαι Φιλίστιων, ὅς τῶτον τὸν χρόνον ἔνεμε κήνεα κατὰ ταῦτα

<sup>a</sup> Scalig. in Euseb. Chron.

<sup>d</sup> Scalig. in Euseb. Chron.

<sup>c</sup> Herodot. lib. 2.

<sup>f</sup> Diodor. lib. 1.

<sup>g</sup> Strabo, lib. 17.

<sup>h</sup> Herodot. lib. 2.

<sup>i</sup> Diodor. lib. 1.

Of



Of the end or intention of the PYRAMIDS, that they were for sepulchres; where, by the way, is expressed the manner of embalming used by the EGYPTIANS.

GREAVES. **T**HAT these Pyramids were intended for sepulchres and monuments of the dead, is the constant opinion of most authors, which have writ of this argument. <sup>a</sup> Diodorus expressly tells us, that Chemmis and Cephren, although they designed (these two greater) for their sepulchres, yet it happened, that neither of them were buried in them. <sup>b</sup> Strabo judges all those near Memphis to have been the sepulchres of kings. Forty stadia from the city (Memphis) there is a certain brow of an hill, in which are many Pyramids, the sepulchres of kings. And in particular he calls another, near the lake of Meris, the <sup>c</sup> sepulchre of Imandes. To which also the writings of the Arabians are consonant, who make the three greater the monuments of Saurid, Hougib, and Fazfarinoun: and the Sabæans the first of them, the sepulchre of Seth, the second of Hermes, the third of Sab, from whom they suppose themselves denominated Sabæans, as we formerly mentioned. And if none of these authorities were extant, yet the tomb found in the greatest Pyramid to this day of Cheops, as Herodotus names him, or Chemmis, according to Diodorus, puts it out of controversy. Which may farther be confirmed by the testimony of Ibn Abd Albokm an Arabian, where he discourses of the wonders of Egypt, who relates that after Almamon, the calif of Babylon, had caused this Pyramid to be open'd [about eight hundred years since,] <sup>d</sup> they found in it towards the top a chamber, with an hollow stone, in which there was a statue like a man, and within it a man, upon whom was a breast-plate of gold set with jewels: upon this breast-plate was a sword of inestimable price, and at his head a carbuncle of the bigness of an egg, shining like the light of the day; and upon him were characters writ with a pen, which no man understood.

Note, In Mr. Greaves's edition of this work, printed at London, Anno 1646. the Arabick is cited at large, to which the curious reader may have recourse.

But why the Egyptian kings should have been at so vast an expence in the building of these Pyramids, is an inquiry of a higher nature. <sup>e</sup> Aristotle judges them

to have been the works of tyranny: and Pliny conjectures, that they built them, partly out of ostentation, and partly out of state-policy, by keeping the people in employment, to divert them from mutinies and rebellions. <sup>f</sup> *Regum pecuniæ otiosa, ac stulta ostentatio. Quippe cum faciendi eas causa à plerisque tradatur, ne pecuniam successoribus, aut æmulis insidiantibus præberent, aut ne plebs esset otiosa.*

But the true reason depends upon higher and more weighty considerations; though I acknowledge these alleged by Pliny might be secondary motives. And this sprang from the theology of the Egyptians, who, as Servius shews in his comment upon these words of <sup>g</sup> Virgil, describing the funeral of Polydorus,

— Animamque sepulcro  
Condimus —

believed, that as long as the body endured, so long the soul continued with it; which also was the opinion of the <sup>h</sup> Stoics. <sup>i</sup> Hence the Egyptians, skilful in wisdom, do keep their dead embalmed so much the longer, to the end that the soul may for a long while continue, and be obnoxious to the body, lest it should quickly pass to another. The Romans did the contrary, burning their dead, that the soul might suddenly return into the generality, that is, into its own nature. Wherefore that the body might not either by putrefaction be reduced to dust, out of which it was first formed; or by fire be converted into ashes (as the manner of the Grecians and Romans was); they invented curious compositions, besides the intombing them in statefully reconditories, hereby endeavouring to preserve them from rottenness, and to make them eternal. <sup>k</sup> *Nec cremare, aut fodere fas putant, verum arte medicatos intra penetralia collocant, faith Pomponius Mela.* And Herodotus gives the reason why they did neither burn nor bury. For, discoursing, in his third book, of the cruelty of Cambyses, and of his commanding that the body of

<sup>a</sup> Τὸν ὃ βασιλέων τῶν καλᾶσκευασάντων αὐτὰς ἑαυτοῖς τάφους συνέβη μηδέτερον αὐτῶν ταῖς πυραμίσιν ἐταφῆναι. Diod. Sic. lib. 1.

<sup>b</sup> Τετ[αράκοντα] δ' ἀπὸ τῆς πόλεως σταδίους προσελθόντι ὁρεινῇ τις ὄρεός ἐστιν, ἐφ' ἣ πολλὰ μὲν πυραμίδες εἰσὶ τάφοι τῶν βασιλέων. Strab. lib. 17.

<sup>c</sup> Ἰμανδὴς δ' ὄνομα ὁ ταφείς. Ibid.

<sup>d</sup> G. Almec. Hist. Arab. ex edit. Erp.

<sup>e</sup> Arist. l. 3. Polit.

<sup>f</sup> Plin. l. 26. c. 12.

<sup>g</sup> Æneid. lib. 3.

Serv. Com. in lib. 3. Æneid.

<sup>h</sup> Stoici medium sequentes, tamdiu animam durare dicunt, quamdiu durat & corpus. <sup>i</sup> Unde Ægyptii periti sapientiæ condita diutius referunt cadavera, scilicet ut anima multo tempore perduret, & corpori sit obnoxia, ne citò ad aliud transeat. Romani contra faciebant comburentes cadavera, ut statim anima in generalitatem, id est, in suam naturam rediret. Serv. Com. in lib. 3. Æneid.

<sup>k</sup> Pompon. Mel. l. 1. c. 9.

Amasis,



*Amasis*, an Egyptian king, should be taken out of his sepulchre, whipt, and used with all contumely, he reports, that after all he bid it to be burnt, <sup>m</sup> commanding that which was not holy. For the Persians imagine the fire to be a god, and neither of them are accustomed to burn the dead body: the Persians for the reason before alleged, because they conceive it unfitting for a god to devour the carcase of a man; and the Egyptians, because they are persuaded the fire is a living creature, devouring all things that it receives, and after it is satisfied with food, dies with that which it hath devoured. Nor is it their custom of giving the dead body <sup>n</sup> to beasts, but of embalming (or salting) it, not only for this reason, but that it may not be consumed with worms. The term used by *Herodotus*, *ταριχεύειν*, of salting or embalming the dead, is also used by <sup>o</sup> *Baruch*, and by <sup>p</sup> *Plato*, and by <sup>q</sup> *Lucian* in his discourse *de Lucru*, treating of the several sorts of burial practised by several nations. <sup>r</sup> The Grecian doth burn [the dead], the Persian bury, the Indian doth anoint with the fat of swine, the Scythian eats, and the Egyptian *ταριχεύει*, embalms (or powders). Which manner also is alluded to by *Antoninus*, under the word *ταριχεύειν*. <sup>s</sup> That which the other day was excrementitious matter, within few days shall either be *ταριχεύειν*, an embalmed body, or mere ashes: in the one expressing the custom of the Egyptians, in the other of the Romans; where doctor <sup>t</sup> *Casaubon*, the learned son of a learned father, hath rightly corrected the errors of those who render *ταριχεύειν* to be a certain sort of fish. By this means, then, salting the body, and embalming it, (the manner of both we shall describe out of *Herodotus* and *Diodorus*) the soul was obliged (according to the belief

of the Egyptians) to abide with the body, and the body came to be as durable as marble: inasmuch as *Plato*, who lived in Egypt with *Eudoxus* no less than XIII years, as <sup>u</sup> *Strabo* witnesseth, brings it for an argument, in his *Phædon*, to prove the immortality of the soul, by the long duration of these bodies. Which surely would have been more conclusive with him, could he have imagined, that to these times, that is, till *CICERO* years after him, they should have continued so solid and intire, as to this day we find many of them. Wherefore <sup>x</sup> *St. Augustin* truly affirms, that the Egyptians alone believe the resurrection, because they carefully preserve their dead corpses; for they have a custom of drying up the bodies, and rendering them as durable as brass: these [in their language] they call *Gabbares*. Whence the gloss of *Isidore*, *Gabbares mortuorum*, in *Vulcanius's* edition; or as <sup>y</sup> *Spondanus* reads, *Gabbares, mortuorum condita corpora*.

The manner how the Egyptians prepared and embalmed these bodies, is very copiously, and, by what I observed, very faithfully described by *Herodotus* and *Diodorus*; and therefore I shall put down their own words: Their mourning, faith <sup>z</sup> *Herodotus*, and manner of burial, are in this kind: When any man of quality of the family is dead, all the women besmear their heads and faces with dirt; then leaving the body with their kindred, they go lamenting up and down the city with their kinsfolks, their apparel being girt about them, and their breasts naked. On the other side, the men, having likewise their cloaths girt about them, beat themselves. These things being done, they carry it to be <sup>a</sup> embalmed. For this there are some appointed, that profess the art: these, when the body is brought to

<sup>m</sup> *Herodot. lib. 3. Ἐντελλόμενον ἐν ὅσῳ. Πέρσαι γὰρ θεὸν νομίζουσι εἶναι τὸ πῦρ, &c.*

<sup>n</sup> This barbarous custom is still practised in the *East-Indies*, as *Teixeira* (who from his own travels, and the writings of *Emir Cond*, a Persian, hath given us the best light of those countries) truly informs us. Wherefore we may give credit to that of *Tully*: *Magorum mos est non humare corpora suorum, nisi à feris sint antea laniata. In Hyrcaniâ plebs publicos alit canes, optimates domesticos (nobile autem genus canum illud scimus esse); sed pro sua quisque facultate parat, à quibus lanietur, eamque optimam illi esse censent sepulturam.* *Tusc. Qu. 1. 1.* <sup>o</sup> *Baruch vi. 71.* <sup>p</sup> *Plat. Phædon.* <sup>q</sup> *Lucian. de Lucr.*

<sup>r</sup> *Ὁ μὲν Ἕλληνας ἐκαύσαν· ὁ δὲ Πέρσης ἐθαύειν· ὁ δὲ Ἰνδοὺς ὑάλλῳ περιχρίει· ὁ δὲ Σκύθης καὶ ἐδίει· ταριχεύει δὲ ὁ Αἰθίοπιος.*

<sup>s</sup> *M. Aurel. Anton. lib. 4. Ἐχθρὸς μὲν μυζάριον, αὐρίον δὲ τάριχος ἢ τέτρα.* <sup>t</sup> *Casaub. Ann. in lib. 4. M. Aurel. Anton. lib. 17.* <sup>u</sup> *Ægyptii verò soli credent resurrectionem, quia diligenter curant cadavera mortuorum; morem enim habent siccare corpora, & quasi ænea reddere: Gabbaras ea vocant.* *Aug. Sermon. 120. de Diversis.* <sup>y</sup> *Spondanus de Cœmet. sacris, lib. 1. par. in c. 5.*

<sup>z</sup> *Herodotus, lib. 2. Θρήνος δὲ καὶ ταφαὶ σφέων ἐστὶ αἰδέει, &c.*

<sup>a</sup> Amongst these imbalanced bodies are found Egyptian idols, *Omnigenumque Deum monstra, & latrator Anubis*, to use *Virgil's* expression (*Æn. 8.*). Some of these are in great, some in little pourtraictures, formed either with potters earth baked, or else of stone, or metal, or wood, or the like; in all which kinds I have bought some. One of them, for the rarity of the matter, and for the illustration of the Scriptures, deserves to be here mentioned; being cut out of a magnes, in the form and bigness of the *κάνθαρος*, or *scarabæus*, which, as <sup>\*</sup> *Plutarch* testifies, was worshipped by the Egyptians, and was by military men engraven as an emblem on their seals. To which sort of idols, it may be, *Moses* alluded, when, speaking of the gods of Egypt, he terms them *גִּלּוּלִים* *gillulim, stercoreos deos*, <sup>†</sup> as the original is rendred by *Junius* and *Tremellius*; for such places are the unfavoury dwellings of the *scarabæus*. That which is remarkable of it in nature is this, that the stone, though probably two thousand years since taken out of its natural bed, the rock, yet still retains its attractive and magnetical virtue.

<sup>\*</sup> *De If. & Osir. τοῖς δὲ μαχίμοις κἀνθαροὺς ἦν γλυφὴ σφραγίδος.* <sup>†</sup> *Deut. xxix. 17. Vidistis abominandos & stercoreos deos illorum.*



GREAVES. them, shew to the bringers of it certain patterns of dead bodies in wood, like it in painting. One of these, they say, is accurately made (which I think it not lawful to name): they shew a second inferior to it, and of an easier price; and a third, cheaper than the former: which being seen, they ask of them, according to what pattern they will have the dead body prepared? When they have agreed upon the price, they depart thence; those that remain, carefully embalm the body in this manner: First of all, they draw out the brain with a crooked iron, by the nostrils; which being taken out, they infuse<sup>b</sup> medicaments. Then, with a sharp Ethiopick stone, they cut it about the bowels, and take out all the guts: these, purged and washed with wine made of palms, they again wash with sweet odours beaten; next, filling up the<sup>c</sup> belly with pure myrrh beaten, and cassia, and other odours, except frankincense, they sew it up again; having done this, they salt it with nitre, biding it seventy days (for longer it is not lawful to salt it); seventy days being ended, after they

have washed the body, binding it with fillets, (or<sup>d</sup> ribbands) and wrapping it in a shroud of silk linen, they smear it with gum, which the Egyptians often use instead of glue. The kindred, receiving it thence, make<sup>e</sup> a coffin of wood, in the similitude of a man, in which they put the dead body; and being thus inclosed, they place it in a reconditory in the house, setting it upright against the wall. In this manner, with great expences, they prepare the funerals of their dead. But those who, avoiding too great expences, desire a mediocrity, prepare them in this manner: They take a clyster with the juice of cedar, with which they fill the belly by the fundament, neither cutting it, nor taking it out, and salt it so many days, as we mentioned before. In the last of which they take out that (clyster) of cedar out of the belly, which before they injected. This hath such efficacy, that it carries out with it the whole paunch and entrails corrupted. The nitre consumes the flesh, and there are only left the skin and bones of the dead body. When they have done this, they restore

<sup>b</sup> Having caused the head of one of the richer sort of these embalmed bodies to be opened, in the hollow of the skull I found the quantity of two pounds of these medicaments; which had the consistence, blackness, and smell of a kind of bitumen, or pitch, and by the heat of the sun waxed soft. This infusion could not well have been made any other way, than as Herodotus here intimates, by the nostrils. The tongue of this embalmed body, being weighed by me, was less than seven grains English. So light was that member, which St. James calls a world of mischief, James iii. 6.

<sup>c</sup> Plutarch writes, that they first exposed the belly, being opened to the sun, casting the bowels into the river (Nilus,) *tanquam inquinamentum corporis*: this being done, they filled up the belly, and the hollow of the breast, with unguents and odours, as it is manifest by those which I have seen.

<sup>d</sup> These ribbands, by what I observed, were of linen, which was also the habit of the Egyptian priests. For Herodotus, lib. 2. writes, that it was profane for the Egyptians either to be buried in woollen garments, or to use them in their temples: and Plutarch, de Iside & Osiride, expressly tells us, that the priests of Isis used linen vestments, and were shaved. Suetonius in Orhone, (lib. 7.) *Sacra etiam Isidis saepe lineâ religiosâque veste propalam celebravit*. And therefore the Goddess Isis is called in Ovid (2 Amor. Eleg. 2.) *Linigera*.  
*Nec tu linigeram fieri quid possit ad Isim,*  
*Quæsieris.*

Of these ribbands I have seen some so strong and perfect, as if they had been newly made. With these they bound and swathed the dead body, beginning with the head, and ending with the feet: Over these, again, they wound others so often upon one another, that there could not be much less than a thousand ells upon one body.

<sup>e</sup> These coffins are fashioned in the similitude of a man, or rather resembling one of those embalmed bodies, which, as we described before, are bound with ribbands, and wrapped in a shroud of linen. For as in those there is the shape of a head, with a kind of painted vizard, or face, fastened to it, but no appearance without of the arms and legs; so it is with these coffins: the top of them hath the shape of the head of a man, with a face painted on it resembling a woman, the residue being one continued trunk: at the end of this trunk is a pedestal, somewhat broad; upon which it stood upright in the reconditory, as Herodotus here mentions. Some of these coffins are handsomely painted without, with several hieroglyphicks. Opening two of them, I found within, over the body, divers scrolls fastened to the linen shroud. These were painted with sacred characters, for the colours, very lively and fresh; amongst which were in a larger size the pictures of men or women, some headed like hawks, some like dogs, and sometimes dogs in shards standing alone. These scrolls either ran down the belly and sides, or else were placed upon the knees and legs. On the feet was a linen cover, and so were all the scrolls before-mentioned of linen, painted with hieroglyphicks, and fashioned like to a high slipper. The breast had a kind of breast-plate covering it, made with folds of linen cut scollop-wise, richly painted and gilt. In the midst of the bend at the top of it, was the face of a woman with her arms expanded; on each side of them, at the two outmost ends, the head of an hawk fairly gilt, by which they represented the Divine Nature, according to Plutarch in his book de Iside & Osiride; as, by a serpent with the tail in his mouth, the revolution of the year was resembled; in which kind also I have seen fair sculptures in gemms, found at Alexandria: and as by the sign of the cross they did denote *vitam æternam*, in Rufinus's expression. Of these crosses I have seen several amongst their hieroglyphicks; some painted, and some engraven in this manner ✕; and some others amongst their mummies formed of stone (or baked earth) in this figure.

At Rome, on the statue of Osiris, it is engraven thus; T: which may serve for confirmation of what Socrates and Sozomen relate; that, at Alexandria, the temple of Serapis or Osiris (for † Plutarch judges Serapis and Osiris to be one and the same) being by the command of Theodosius demolished, they found characters resembling crosses cut in stone: these, in the interpretation of the wise men of Egypt, signified ζωὴν ἐπερχομένην, *vitam venturam*: which discovery, as the same authors report, occasioned the conversion to Christianity of some of the Gentiles. Socr. hist. eccles. lib. 5. cap. 17. Sozomen. hist. eccles. lib. 7. cap. 15.

† Ἀμφοῖς δὲ ἐνδὲς Θεῶν καὶ μῖα δὲ συνάμεινος ἡγούμενοι. Plut. de Is. & Osir.

the



the body to the kindred, doing nothing more. The third manner of preparing the dead, is of them which are of meaner fortune: With lotions they wash the belly, and dry it with salt seventy days; then they deliver it, to be carried away.

Diodorus Siculus<sup>f</sup>, as his manner is, more distinctly and clearly, with some remarkable circumstances, expresseth the same thing: If any one die amongst the Egyptians, all his kindred and friends, casting dirt upon their heads, go lamenting about the city, till such time as the body is buried. In the mean time, they abstain from baths and wine, and all delicate meat; neither do they wear costly apparel. The manner of their burial is threefold: the one is very costly; the second less; the third very mean. In the first, they say there is spent a talent of silver; in the second, twenty minæ; in the last, there is very little expence. Those who take care to dress the body, are artizans, receiving this skill from their ancestors. These, shewing a bill to the kindred of the dead, of the expences upon each kind of burial, ask them in what manner they will have the body to be prepared. When they have agreed upon it, they deliver the body to such as are usually appointed to this office. First, he which is called the scribe, laying it upon the ground, describes about the bowels on the left side, how much is to be cut away. Then he which is called the cutter, taking an Ethiopick stone, and cutting away as much of the flesh as the law commands, presently flies away as fast as he can; they which are present, running after him, and casting stones at him, and cursing him, (hereby) turning all the execration upon him. For whosoever doth offer violence, or wound, or do any kind of injury to a body of the same nature with himself, they think him worthy of hatred. But those which are called the embalmers, they esteem them worthy of honour and respect. For they are familiar with their priests, and they go into the temples, as holy men, without any prohibition. As soon as they meet about the dressing of the dissected body, one, thrusting his hand by the wound of the dead body into his entrails, takes out all the bowels within, besides the heart and kidneys; another cleanses all the entrails, washing them with wine made of palms, and with odours. Lastly, the whole body being carefully anointed with the juice of cedar, and other things, for above thirty days, and afterwards with myrrh and cinnamon, and such other

things, which have power not only to keep it for a long time, but also to give a sweet smell, they deliver it to the kindred. This being thus finished, every member of the body is kept so intire, that upon the brows and eye-lids the hairs remain, and the whole shape of the body (continues) unchanged, the image of the countenance may be known. Hence many of the Egyptians, keeping the bodies of their ancestors in magnificent houses, do see so expressly the faces of them dead many ages before they were born, that, beholding the bigness of each of them, and the dimensions of their bodies, and the lineaments of their faces, it affords them wonderful content of mind, no otherwise than as if they were now living with them. Thus far Diodorus. By which description of his, and that of Herodotus, we see the truth of what<sup>h</sup> Tully writes: The Egyptians embalm their dead, and keep them at home: amongst themselves above ground, saith Sextus Empiricus; and<sup>i</sup> intra penetralia, in Pomponius Mela's expression: and in *lectulis*, according to Athanasius, in the life of Antony. Lucian adds farther, in his tract *de Lucru*;<sup>k</sup> They bring the dried body (I speak what I have seen) as a guest to their feasts and invitations; and oftentimes one necessitous of money is supplied, by giving his brother or his father in pledge. The former custom is intimated by Silius<sup>l</sup> Italicus, speaking of the several manners of burial practised in divers nations.

*Ægyptia tellus*

*Claudit odorato post funus stantia saxo,  
Corpora, & à mensis exanguem baud separ-  
rat umbram.*

The latter is confirmed by Diodorus Siculus<sup>m</sup>: They have a custom of depositing for a pledge the bodies of their dead parents. It is the greatest ignominy that may be, not to redeem them; and if they do it not, they themselves are deprived of burial. And therefore says he immediately before, Such as, for any crime or debt, are hindered from being buried, are kept at home without a coffin; whom afterwards their posterity, growing rich, discharging their debts, and paying money in compensation of their crimes, honourably bury; for the Egyptians glory, that their parents and ancestors were buried with honour.

This manner of the Egyptians embalming, we find also practised by Joseph upon his father Jacob in Egypt: and if we will

<sup>f</sup> Diod. Sic. lib. 1.

<sup>g</sup> I find in the travels of Monsieur de Breves, ambassador at Constantinople, that, at his being in Egypt about forty years since, they saw some of these embalmed bodies, with hairs remaining on their heads, and with beards; which I easily believe: *Nous en vîmes aucuns la teste & les pieds decouverts, (à cause que les dites bandes estoient pourries) qui avoient encore les cheveux, la barbe, & les ongles.* Les Voyages de M. de Breves.

<sup>h</sup> *Condiunt Egyptii mortuos, & eos domi servant.* Tuscul. Qu. lib. 1.  
<sup>i</sup> Lib. 1. cap. 9. <sup>k</sup> Οὐτὸς μὲν οὐκ ἔστιν ἡ (λέγω δὲ ἰδὼν) ζήσαντας τὸν νεκρὸν, σύνδεσσαν καὶ συμπτῶν ἐποίησας πολλὰς δὲ καὶ δεομένης χρημάτων ἀνδρὶ Αἰγυπτίῳ ἔλυσεν τὴν ἀπορίαν ἐρέχουρον ἢ ὁ ἀδελφὸς ἢ ὁ πατὴρ γινόμενος ἐν καιρῷ. Luc. an. περὶ πεινθῶς.

<sup>l</sup> Lib. 3. Punicorum.

<sup>m</sup> Diodor. S. c. l. 1.



GREAVES. believe Tacitus, <sup>n</sup> the Hebrews (in general) learned from the Egyptians rather to bury their dead, than to burn them. Where <sup>o</sup> Spondanus, instead of *condere cadavera*, reads *condire*, as if it had been their custom of powdering or embalming their dead. Wash them and anoint them we know they did, by what was done to our Saviour, and to the widow Dorcas; and, long before, it was in use among the Gentiles, as well as Jews; as appears by the funeral of Patroclus in <sup>p</sup> Homer, and of Misenus the Trojan in <sup>q</sup> Virgil:

*Corpusque lavant frigentis, & unguunt.*

And of Tarquinius the Roman in Ennius:

*Tarquinius corpus bona sœmina lavit, & unxit.*

But certainly the Egyptian manner of embalming, which we have described out of Herodotus and Diodorus, was not received by them; or, if it were, <sup>r</sup> Martha the sister of Lazarus needed not to have feared, that, after four days, the body should have stunk. <sup>s</sup> They which infer out of the funeral of Asa, king of Judah, that it was the custom of the Jews, as well as Egyptians, have very little probability for their assertion. <sup>t</sup> We read, that they buried him in his own sepulchre, which he had made for himself in the city of David; and laid him in the bed, which was filled with sweet odours, and divers kinds of spices prepared by the apothecaries art; and they made a very great burning for him. This very great burning is so contrary to the practice of the Egyptians, to whom it was an abomination, as appears by the authorities before cited of Herodotus and Mela, besides the little affinity of filling the bed with sweet odours, and the Egyptians filling the body and the place of the entrails with sweet odours, according both to Herodotus and Diodorus, that we shall not need to enlarge ourselves in any other confutation. But, as for that of Jacob and Joseph, the father and the son, both living and dying in Egypt, the text is clear, they were embalmed after the fashion of the Egyptians: <sup>u</sup> And Joseph commanded his servants the physicians to embalm his father; and the physicians embalmed Israel, and forty days were fulfilled for him (for so are fulfilled the days of those which are

embalmed); and the Egyptians mourned for him threescore and ten days. In the same chapter we read, <sup>w</sup> So Joseph died, being an hundred and ten years old; and they embalmed him, and he was put in a coffin in Egypt. Both which places are very consonant to the traditions of Herodotus and Diodorus, and may serve to shew what necessity there is of having oft-times recourse to the learning of the heathen, for the illustration of the Scriptures. Forty days were fulfilled for the embalming of Jacob. This, <sup>x</sup> Diodorus tells us, was their custom, They anointed the dead body with the juice of cedar, and other things, for above thirty days, and afterward with myrrh and cinnamon, and the like; which might make up the residue of the forty days: And the Egyptians mourned for him threescore and ten days. This time, out of Herodotus, may be collected to have been from the first day of the death of the person, till the body was returned by the physicians, after seventy days, perfectly embalmed. The text says, And Joseph was put in a coffin; which is very lively represented by <sup>y</sup> Herodotus: The kindred, receiving the dead body from the embalmers, make a coffin of wood in the similitude of a man, in which they put it. This coffin then, as it is probable, of Joseph, was of wood, and not marmorea theca, as Cajetan imagines, the former being the custom of the Egyptians; besides, that this was much easier and fitter to be carried by the Israelites into Canaan, marching on foot, and, for aught we read, destitute of waggons and other carriages.

The <sup>z</sup> tradition of the ancient Hebrews, in their commentaries, is very probable, and consonant to it: They carried in the desert two arks, the one of God, the other of Joseph; that the ark of the covenant, this the ark (or coffin) in which they carried Joseph's bones out of Egypt. This coffin (if it be lawful for me to conjecture, after the revolution of three thousand years) I conceive to have been of sycomore (a great tree, very plentifully growing in Egypt); of which sort there are many found in the mummies, very fair, intire, and free from corruption, to this day: though I know the Arabians and Persians have a different tradition, that his coffin was of glass. <sup>a</sup> They put his blessed body, after they

<sup>n</sup> *Judeos ab Ægyptiis didicisse, condere cadavera, potius quam cremare.* Tacit. Histor. lib. 5.

<sup>o</sup> Spondan. lib. 1. part. 1. cap. 5. de Cœmeteriis sacris.

<sup>p</sup> *Καὶ τότε δὴ λίσσαν τε, καὶ πλεῖσαν λίπ' ἐλάω.* Iliad. lib. 19. <sup>q</sup> Æneid. lib. 6. <sup>r</sup> John xi. 39.

<sup>s</sup> *Translulerunt Israelitæ hunc ritum ex Ægypto secum in Canaanam, quo deinceps in sepulturis principum & regum usi dicuntur in historia Asæ, 2 Paral. vi. & alibi.* D. Paræi Com. in Gen. l. 2. <sup>t</sup> 2 Chron. xvi. 14.

<sup>u</sup> Gen. l. 2, 3.

<sup>w</sup> Gen. l. 26.

<sup>x</sup> Diod. Sic. lib. 1. *Καθόλου δὲ πᾶν τὸ σῶμα τὸ μὲν πρῶτον κεδρίῳ καὶ τισὶν ἄλλοις ἐπιμελείαις θεῖται ἐφ' ἡμέρας πλείους τῶν τετράκοντα, ἐπεὶ αὖ σμυρνὴ καὶ κιννάμωμον, &c.* <sup>y</sup> Herod. lib. 2.

<sup>z</sup> *Veteres Hebræi commentati sunt duas fuisse arcas, unam incedentes in deserto, alteram Divinitatis, alteram Josephi; illam scilicet arcam fœderis, hanc vero loculos quibus Josephi ossa ex Ægypto asportabantur in regionem Chanaan.* Perer. Com. in l. cap. Genes.

<sup>a</sup> Note, in Mr. Greaves's edition of this work, printed at London, anno 1646, the Arabic is cited at large; to which the curious reader may have recourse.

had



had washed it, into a coffin of glass, and buried it in the chanel of the river Nilus, faith Emir Cond a Persian.

That phrase of Joseph, where he takes an oath of the children of Israel, *"Ye shall carry up my bones from hence, surely is a synecdoche, or figurative speech.* And so is that in Exodus: *And Moses took the bones of Joseph with him; for he had straitly sworn the children of Israel, saying, God will surely visit you; and ye shall carry up my bones away hence with you: for his body being boweled, and then imbalmed, after the manner of the Egyptians, not only the bones, but the skin, the flesh, and all besides the entrails, (which, according to Plutarch, were thrown into the river) would have continued perfect and intire, a much longer space than from his death to their migration out of Egypt.*

Having thus, by art, found out ways to make the body durable, whereby the soul might continue with it, as we shewed before, which else would have been at liberty to have passed into some other body; <sup>a</sup> this also being the opinion of the Egyptians, from whom Pythagoras borrowed his *μετεμύχσις*, or transanimation (the which made him to forbid his disciples the eating of flesh, *Ne forte bubulam quis de aliquo proavo suo obsonaret*, as Tertullian wittily speaks); the next care of the Egyptians was to provide conditories, which might be as lasting as the body, and in which it might continue safe from the injury of time and men. That occasioned the ancient kings of Thebes in Egypt to build those, which <sup>c</sup> Diodorus thus describes: *There are, they say, the wonderful sepulchres of the ancient kings, which, in magnificence, exceeds the imitation of posterity. Of these, in the sacred commentaries, forty-seven are mentioned; but, in the time of Ptolemæus Lagi, there remained but xvii. Many of them, at our being in Egypt in the hundred-and-eightieth olympiad, were decayed; neither are these things alone reported by the Egyptians, out of the sacred books, but by many also of the Grecians, who, in the time of Ptolemæus Lagi, went to Thebes; and, having compiled histories, (amongst whom is Hecataeus) agree with our relations. And this might occasion also those others recorded by Strabo, which he calls *ἐρμαία*, or *mercuriales tumulos*, seen by him near Siene, in the upper parts of Egypt, very*

strange and memorable: <sup>f</sup> *Passing in a chariot from Siene to Philæ, over a very even plain, about an hundred stadia, all the way almost, of both sides, we saw in many places mercurial tombs; a great stone, smooth, and almost spherical, of that black and hard marble out of which mortars are made, placed upon a greater stone, and on the top of this another, some of them lying by themselves; the greatest of them was no less than twelve feet diameter, all of them greater than the half of this. Many ages alter, when the regal throne was removed from Thebes to Memphis, the same religion and opinion continuing amongst the Egyptians, that so long as the body endured, so long the soul continued with it, not as quickening and animating it, but as an attendant or guardian, and, as it were, unwilling to leave her former habitation. It is not to be doubted, this incited the kings there, together with their private ambition, and thirst after glory, to be at so vast expences in the building of these Pyramids; and the Egyptians of lower quality, to spare for no cost, in cutting those hypogæa, those caves or dormitories in the Libyan desarts, which by the Christians, now-a-days, are called the mummies. Diodorus Siculus excellently expresses their opinion and belief in this particular, together with their extreme cost of building sepulchres, in these words: <sup>g</sup> *The Egyptians make small account of the time of this life being limited, but that which, after death, is joined with a glorious memory of virtue, they highly value: they call the houses of the living, inns, because for a short space we inhabit these; but the sepulchres of the dead they name eternal mansions, because they continue with the gods for an infinite space. Wherefore in the structures of their houses they are little solicitous, but in exquisitely adorning their sepulchres they think no cost sufficient.**

Now why the Egyptians did build their sepulchres often in the form of Pyramids, (for they were not always of this figure, as appears by those *ἐρμαία*, or *mercuriales tumuli*, before cited out of Strabo, which were spherical; and by those *hypogæa*, or caves, still extant in the rocks of the desert) Pierius in his hieroglyphicks, or rather the anonymous Author at the end of him, gives several philosophical reasons:

<sup>h</sup> *By a Pyramid, faith he, the ancient Egyptians*

<sup>a</sup> Gen. l. 25.

<sup>b</sup> Exod. xiii. 19.

<sup>c</sup> Plutar. 7. sapient. convivio.

<sup>d</sup> *Πρῶτοι δὲ καὶ τὸνδε τὸν λόγον Αἰγυπιοὶ εἰσὶ εἰπόντες, ὡς ἀνθρώπε ψυχὴ ἀθάνατος ἐστὶ τῷ σώματι, καὶ καθ' ἑαυτὴν οὐκ ἐξέρχεται, ἐξ ἄλλου ζῶντος αἰεὶ γινόμενον ἐσθ' ὅτι αἱ.* Herod. lib. 2.

<sup>e</sup> Diod. Sic. lib. 1. *Εἶναι δὲ φασὶ καὶ τὰς ἐν αὐτῇ τῶν ἀρχαίων βασιλέων θαυμαστές, &c.*

<sup>f</sup> Strabo, lib. 17. *Ἦλθομεν δ' εἰς Φιλὰς ἐν Σινοῦντι ἀπὸ τῆς ὁδοῦ ἀπὸ τῆς Σιδεῖς περὶ τὴν Σιδεῖς ὁδὸν. Πὰρ ὅλην δὲ τὴν ὁδὸν ἦν ἰδεῖν ἐκαστὴν πολλὰ καὶ ὡς περὶ ἐρμαία, &c.*

<sup>g</sup> Diod. Sic. lib. 1. *Οἱ γὰρ ἐσχατοὶ τὸν μὲν ἐν τῷ ζῆν χρόνον εὐτελὴ πάντη ὡς εἶναι νομίζουσι, τὸν δὲ μετὰ τὴν τελευτὴν δὲ ἀρετὴν μνημονοῦσιν, περὶ πολλὰς ποιῶνται. Καὶ τὰς μὲν τῶν ζῶντων οἰκίσεις καλεῖσθαι, &c.*

<sup>h</sup> Ex eruditi cujusd. l. 2. sub finem Hierogl. Pierii. *Per Pyramidem veteres (Ægyptii) rerum naturam, & substantiam illam informem formas recipientem significare voluerunt, quod ut Pyramis à puncto, & summo fastigio*



GREAVES.

tians expressed the nature of things, and that informed substance receiving all forms; because as a Pyramid, having its beginning from a point at the top, is, by degrees, dilated on all parts; so the nature of all things, proceeding from one fountain and beginning, which is indivisible, namely, from God, the chief workmaster, afterwards receives several forms, and is diffused into various kinds and species, all which it conjoins to that beginning and point, from whence every thing issues and flows. There may also be given another reason for this, taken from astronomy: for the Egyptians were excellent astronomers, yea, the first inventors of it; these [dividing the Zodiac, and all things under it, into twelve signs] will have each sign to be a kind of Pyramid, the basis of which shall be in the heaven, (for the heaven is the foundation of astronomy) and the point of it shall be in the centre of the earth. Seeing therefore in these Pyramids all things are made, and that the coming of the sun, which is, as it were, a point in respect of those signs, is the cause of the production of natural things, and its departure the cause of their corruption; it seems very fitly, that by a Pyramid, nature, the parent of all things, may be expressed. Also the same Egyptians, under the form of a Pyramid, shadowed out the soul of man, making, under huge Pyramids, the magnificent sepulchres of their kings and heroes, to testify, that the soul was still existent, notwithstanding the body were dissolved and corrupted; the which should generate and produce another body for itself, when it should seem good to the first agent (that is, the circle of thirty-six thousand years being transacted); like as a Pyramid (as it is known to geometricians) the top of it standing fixed, and the base being moved about, describes a circle, and the whole body of it a cone; so that the circle expresses that space of years, and the cone that body which in that space is produced. For it was the opinion of the Egyptians, that, in the revolution of thirty-six thousand years, all things should be restored to their former state. Plato witnesseth, that he received it from them; who seems also to me, in his *Timæus*, to attest this thing, that is, that our soul hath the form of a Pyramid, which (soul) according to the same Plato, is of a fiery nature, and adhereth to the body as a Pyramid doth

to the basis, or as fire doth to the fuel. Thus far the anonymous author in *Pierius*: most of which reasons of his are but pretty fancies, without any solid proof from good authors. For he might as well say, that the Egyptians were excellent geometricians, as well as astronomers, (as they were very skilful in both) and that they made these Pyramids, to express the first and most simple of mathematical bodies; or else, being excellent arithmeticians, to represent the mysteries of pyramidal numbers; or, being well seen in opticks, to shadow out the manner of vision, and the emission of rays from luminous bodies, as also the effluvium of the species intentionales from the object, all which are supposed to be pyramidal. But this were to play with truth, and to indulge too much to fancy. Wherefore I conceive the reason why they made these sepulchres in the figure of a Pyramid, was, either as apprehending this to be the most permanent form of structure, as in truth it is (for, by reason of the contracting and lessening of it at the top, it is neither over-pressed with its own weight; nor is so subject to the sinking in of rain as other buildings); or hereby they intended to represent some of their gods. For anciently the Gentiles expressed them, either by columns fashioned like cones, or else by quadrilateral obelisks, the Egyptian manner; in which latter kind, I have seen many standing very intire, some of them plain, and some with hieroglyphicks inscribed. Now such obelisks are but lesser models of the Pyramids, as the Pyramids are but greater kinds of obelisks. The first institution of them, as <sup>1</sup> Pliny informs us, was by *Mitres* an Egyptian king, whom <sup>2</sup> *Isidore* terms *Mesphres*; both of them affirming him to have consecrated them *solis numini*, to the deity of the sun. Which deity <sup>3</sup> *Diodorus* relates the Egyptians to have worshipped under the name of *Osiris*, as they did the moon by the goddess *Isis*, whom the *Libyans*, bordering on the Egyptians, termed *Urania*, and the *Phœnicians* *Astroarches*, according to <sup>4</sup> *Herodian*: and therefore, as *Isis Cornigera*, in which portraiture I have observed her statue at *Alexandria* to be formed) did represent the horns of the moon,

*tigio incipiens, paulatim in omnes partes dilatatur, sic rerum omnium natura ab unico principio & fonte, qui dividi non potest, nempe à Deo summo opifice profecta, varias deinde formas suscipit, & in varia genera atque species diffunditur, omniaque apici illi & puncto conjungit, à quo omnia manant & fluunt. Verum & alia hujus rei ratio, nempe astronomia, reddi potest, &c.*

<sup>1</sup> *Trabes ex eo fecere reges quodam certamine, obeliscos vocantes solis numini sacros. Radiorum ejus argumentum in effigie est; & ita significabatur nomine Egyptio. Primus omnium id instituit Mitres, qui in solis urbe regnabat, somnio jussus. Plin. lib. 36. cap. 8.*

<sup>2</sup> *Obeliscum Mesphres rex Egypti primus fecisse fertur—qui post cecitatem visio recepto, duos obeliscos soli consecrav. Isid. lib. 18. cap. 31.*

<sup>3</sup> *Ἰσολαβεῖν εἶναι δὲ οὐδὲν ἀδύνατον τε καὶ πρῶτον, τὸν τε ἥλιον, καὶ τὴν σελήνην, ἐν τῷ μὲν Ὀσίει, τὴν δὲ Ἰσὶν ὀνομάσαι. Diod. Sic. lib. 1.*

<sup>4</sup> *Ἀίβρες μὲν ἐν αὐτῇ Οὐρανίαν καλεῖσι, Φοίνικες δὲ Ἀστροάρχην ὀνομάζουσι, σελήνην εἶναι θεοῖσιν. Herodian. lib. 5.*

or



or *luna falcata*; so these quadrilateral Pyramids, or obelisks, might not unfitly resemble the rays of the sun, or their god *Osiris*: a god denominated, as <sup>n</sup> *Plutarch* testifies, from *Os*, signifying, in the *Egyptian* language many, and *Iri*, eyes. For which reason, both <sup>o</sup> *Diodorus* and *Plutarch* term *Osiris* in Greek πολυόφθαλμον, many eyes, or many rays; the which, emitted, as the opticks demonstrate, in pyramidal or conical forms, might not unaptly, by the Gentiles, be represented in either figure. Hence the *Phœnicians*, next neighbours to the *Egyptians*, and, probably, first imitators of this their idolatry, worshipped the sun, whom they named *Elæagabalus*, or, as the ancient coins render him, *Alegabalus*, and some inscriptions *Heliogabalus*, an idol, in the similitude of a cone. <sup>p</sup> *Herodian* (l. 5.): *The Phœnicians worship the sun, calling him, in their language, Elæagabalus; to whom there is erected a very spacious temple, adorned with gold, plenty of silver, and precious stones. It is not only worshipped by the natives, but likewise the great men and kings of the Barbarians, every year, with a kind of emulation, send honourable presents to the god. There is no statue, as among the Greeks and Romans, which, polished by hand, may express the image of the god; but there is a certain great stone, circular below, and ending with a sharpness above, in the figure of a cone, of black colour. They report it to have fallen from heaven, and to be the image of the sun.* This idolatry, by commerce with the *Egyptians* and *Phœnicians*, came afterward to be communicated to the *Grecians*, and other nations; and, from these, what, at the first institution, was proper to the sun, came, by superstition, to be applied to their other gods. Thus <sup>q</sup> *Tacitus* (lib. II. hist.): at *Cyprus* in the temple of *Venus*, at *Paphos*, *The image of the goddess is not of human shape, but a figure rising continually round, from a larger bottom to a small top, in conical fashion; the reason thereof is not known: though what Tacitus rendereth, metæ modo exurgens,*

or conical, *Maximus Tyrius* termeth pyramidal. <sup>r</sup> *In Paphos, Venus hath the chiefest honour; howbeit, her image you can liken to nothing so well as to a white Pyramid. In like manner we find in <sup>s</sup> Clemens Alexandrinus, that Calithoe, the priestess of Juno, decked the column of the goddess with crowns and garlands; that is, saith <sup>t</sup> Joseph Scaliger, the image of the goddess with crowns and garlands; for, at that time, the statues of the gods were κίονες πυραμοειδείς, pyramidal columns, or obelisks. And <sup>u</sup> Απόλλων ἀγχεύς was nothing else with the *Grecians* but κίον ἐκ ὀξυλίου, a column ending in a point, as <sup>v</sup> *Suidas* witnesseth: which kind of columns some make proper to Apollo, others to Bacchus, and others to them both. In *Pausanias* also we read, that in the city *Corinth*, *Jupiter Milichius*, and *Diana*, surnamed *Patroa*, were made with little or no art; *Milichius* being represented by a Pyramid, and *Diana* by a column. Whence, not improbably, the same <sup>x</sup> *Pausanias*, in his *Corinthiacis*, conjectures this manner of representation of the gods to have been the first and most ancient among the *Grecians*. But *Clemens Alexandrinus*, deriving the beginning of it much higher, imagines it to have been the first kind of idolatry in the world (and therefore well agreeing with the antiquity of the *Egyptians*): <sup>y</sup> Before the exact art of making statues was found out, the ancients, erecting columns, [pyramidal or conical columns] worshipped these as the images of God.*

This practice of the *Egyptians*, I mean of erecting Pyramids for sepulchres, was but rarely imitated by other nations; though *Servius* seems to make it frequent in his comment upon these verses of *Virgil*:

—Fuit ingens monte sub alto  
Regis Dercenni, terreno ex aggere bustum  
Antiqui Laurentis, opacaque ilice tectum.

<sup>z</sup> With the ancients (saith *Servius*) noblemen were buried either under mountains, or

<sup>n</sup> Τὸν γὰρ βασιλέα καὶ κύριον Ὀσίην ὀφθαλμῶ καὶ σκήπτρῳ γράφουσιν. ἔνιοι δὲ καὶ τὸν ὄνομα διεμενέσσι πολυόφθαλμον, ὡς τὸ μὲν Ὀς τὸ πολὺ, τὸ δὲ Ἰρι τὸν ὀφθαλμὸν Αἰγυπτίᾳ γλώττῃ φερέσθης. *Plut. de Isid. & Osir.*

<sup>o</sup> Εἶναι τὸν μὲν Ὀσίην πολυόφθαλμον, εἰκότως, πάντῃ γὰρ ἐπιβάλλοντα τὰς ἀστέρας, ὥσπερ ὁ βασιλεὺς πολλοῖς βλέπειν ἅπασαν γῆν καὶ θάλασσαν. *Diod. lib. i.*

<sup>p</sup> Τῶν [τὸν ἥλιον] οἱ ἐπιχώριοι σέβουσι, τῇ φοινίκῃ φανῇ Ἐλαταγέλαον καλεῖσθαι. νεὸς δὲ αὐτῷ μέγας, &c. Αἰδοῦναι δὲ τις ἐστὶ μέγιστος, κατὰθεν περιφάτης, λήγων ἐκ ὀξυλίου κωνοειδὲς αὐτῷ σχῆμα, μέλανά τε ἢ χροία, &c. *Herodian. lib. 5.*

<sup>q</sup> Simulachrum Deæ non effigie humanæ, continuis orbis latiore initio tenem in ambitum metæ modo exurgens; ratio in obscuro. *Tacit. lib. 2. histor.*

<sup>r</sup> Παρίοις ἢ μὲν Ἀφροδίτῃ τὰς τιμὰς ἔχει, τὸ δὲ ἄγαλμα ἐκ ἄν ἐκδοῖται ἄλλῃ τῷ ἢ πυραμίδι κειμένη. *Max. Tyr. διαλέξει λή.*

<sup>s</sup> *Clem. Alexandr. lib. i. Stromatum ex Phoronidis auctore.*

<sup>t</sup> *Scaliger in Eusebii Chronicon.*

<sup>u</sup> Ἀπόλλων] Ἀγχεύς δὲ ἐστὶ κίον ἐκ ὀξυλίου, ὃν ἰσᾶσι πρὸ τῶν θυρῶν ἰδίως δὲ φασιν αὐτὸς εἶναι Ἀπόλλωνος, οἱ δὲ Διονύσου, οἱ δὲ Ἀμφιῶν. *Suidas.*

<sup>x</sup> Ἐστὶ δὲ Ζεὺς Μελίχιος, καὶ Ἀρτεμὶς ὀνομαζομένη Παρθία, σὺν τέχνῃ πεποιημένη ἑδεμία. *Πυραμίδι Μελίχιος, ἢ δὲ κίον ἐστὶν εἰκασμένη. Pausan. Corinthiaca.*

<sup>y</sup> Πρὶν γὰρ ἐν ἀριστοῦται τῶν ἀγαλμάτων χέσεις, κίονας ἰσᾶντες οἱ παλαιὸι ἔσεον τότε, ὡς ἀφιδρύματα τῶ Θεοῦ. *Clem. Alex. lib. i. Stromatum.*

<sup>z</sup> *Apud majores, nobiles aut sub montibus, aut in montibus sepeliebantur; unde natum est, ut supra cadavera, aut Pyramides fierent, aut ingentes collocarentur columna. Serv. in Virg.*



GREAVES. *in mountains; whence the custom came, that over the dead, either Pyramids were made, or huge columns erected. In imitation of the latter custom, it may be, <sup>a</sup> Absalom erected his pillar; and Pausanias, describing the manner of burial amongst the ancient nation of the Sicyonians, tells us, <sup>b</sup> that they covered the body with earth, and raised pillars over it. But for the former of the Pyramids, I find none out of Egypt accounted miraculous, unless it be the sepulchre of Porfena king of Hetruria, (with which I shall conclude) described by Pliny out of Varro; being more to be admired for the number and contrivance of the Pyramids, than for any excessive magnitude.*

*We shall use M. Varro's own words in the description of it.*

*He was buried, saith he, without the city Clusium, in which place he left a monument of square stone. Each side of it is three hundred feet broad, and fifty feet high. Within*

*the square basis there is an inextricable labyrinth, whither who so adventures without a clue can find no passage out. Upon this square there stand five Pyramids, four in the angles, and one in the middle; in the bottom they are broad seventy-five feet, and high an hundred and fifty. They are pointed in such a manner, that at the top there is one brass circle and covering for them all, from which there hang bells fastened to chains: these, being moved by the wind, give a sound afar off, as at Dodona it has formerly been. Upon this circle there are four other Pyramids, each of them an hundred feet high: above which, upon one plain, there are five Pyramids, the altitude of which Varro was ashamed to add. The Hetruscan fables report, that it was as much as that of the whole work. With so vain a madness he sought glory, by an expence useful to no man; wasting besides the wealth of his kingdom; that, in the end, the commendation of the artificer should be the greatest.*

<sup>a</sup> 2 Sam. xviii. 18.

<sup>b</sup> Pausaniae Corinth. five lib. 2.

Αὐτοὶ δὲ Σικυώνιοι τὰ πολλὰ ἐοικότες τρόποι δάπτουσι· τὸ γὰρ σῶμα γῇ κρύπτουσιν· λίθου δὲ ἐποικιλοδομήσαντες κρητῖδα, κίονας ἐρεῖσάσι.

<sup>c</sup> Plin. l. 36. c. 13. Utemur ipsius M. Varronis in expositione ejus verbis. Sepultus est, inquit, sub urbe Clusio, in quo loco monumentum reliquit lapide quadrato, singula latera pedum lata tricenū, alta quinquagenū: inque basi quadratā intus labyrinthum inextricabilem: quod si quis improperet sine glomere lini, exitum invenire nequeat. Supra id quadratum Pyramides stant quinque, quatuor in angulis, & in medio una; in imo latæ pedum septuagenū quinū, altæ centum quinquagenū: ita fastigiatae, ut in summo orbis æneus, & petasus unus omnibus sit impositus, ex quo pendeant excepta catenis tintinnabula, quæ vento agitata longè sonitus referant, ut Dodonæ olim factum: supra quem orbem quatuor Pyramides insuper singulæ extant altæ pedum centenū: supra quas uno solo quinque Pyramides, quarum altitudinem Varronem puduit adjicere. Fabulæ Hetruscæ tradunt eandem fuisse quam totius operis: adeò vesana dementia quæsisse gloriam, impendio nulli profuturo. Præterea fatigasse regni vires, ut tamen laus major artificio esset. Plin. l. 36. c. 13.

*A Description of the PYRAMIDS in EGYPT, as I found them in the CIO XL VIII Year of the Hegira, or in the Years CIO IO CXXXVIII, and CIO IO CXXXIX of our LORD, after the Dionysian Account.*

HAVING discovered the founders of these Pyramids, and the time in which they were erected, and lastly, the end for which these monuments were built; next, in the method we proposed, the *sciography*

of them is to be set down: where we shall begin with the dimensions of their figure without, and then we shall examine their several spaces and partitions within.

*A Description of the first and fairest PYRAMID.*

THE first and fairest of the three greater Pyramids is situated on the top of a rocky hill in the sandy desert of Libya, about a quarter of a mile distant to the west, from the plains of Egypt: above which the rock riseth an hundred feet or better, with a gentle and easy ascent. Upon this advantageous rise, and upon this solid foundation, the Pyramid is erect-

ed; the height of the situation adding to the beauty of the work, and the solidity of the rock giving the superstructure a permanent and stable support. Each side of the pyramid, computing it according to <sup>d</sup> Herodotus, contains in length 10 cec Grecian feet; and in <sup>e</sup> Diodorus Siculus's account 10 cc: <sup>f</sup> Strabo reckons it less than a furlong, that is, less than 10 c Grecian

<sup>d</sup> Herodot. l. 2.

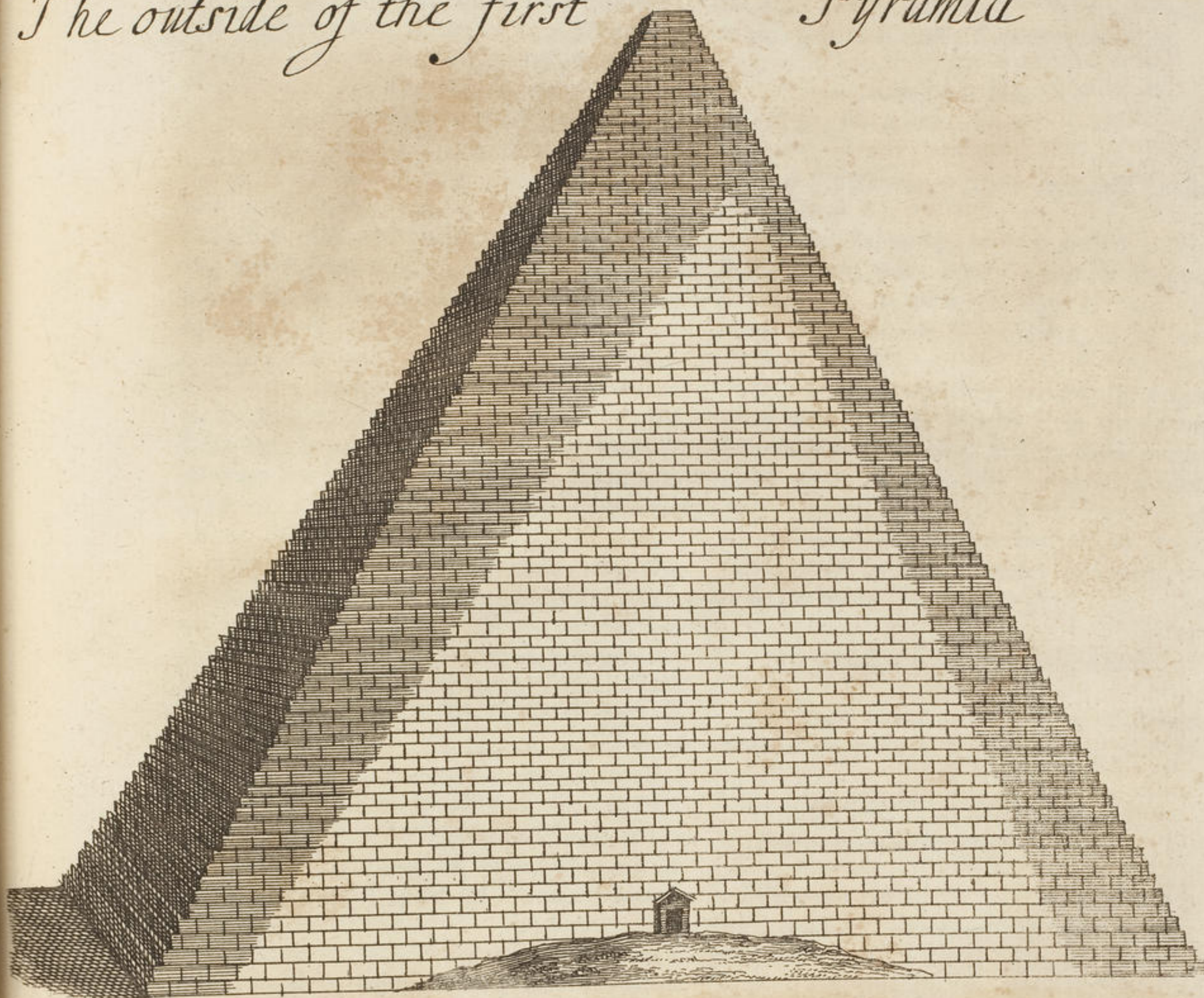
<sup>e</sup> Diod. l. 1. Ἡ μὲν γὰρ μέγιστη τετράπλευρος ἔσα τῷ χήματι, τὴν ἐπὶ τῆς βάσεως πλευρὰν ἐκάστην ἔχει πλέθρων ἑπτα.

<sup>f</sup> Strabo, l. 17.

feet,

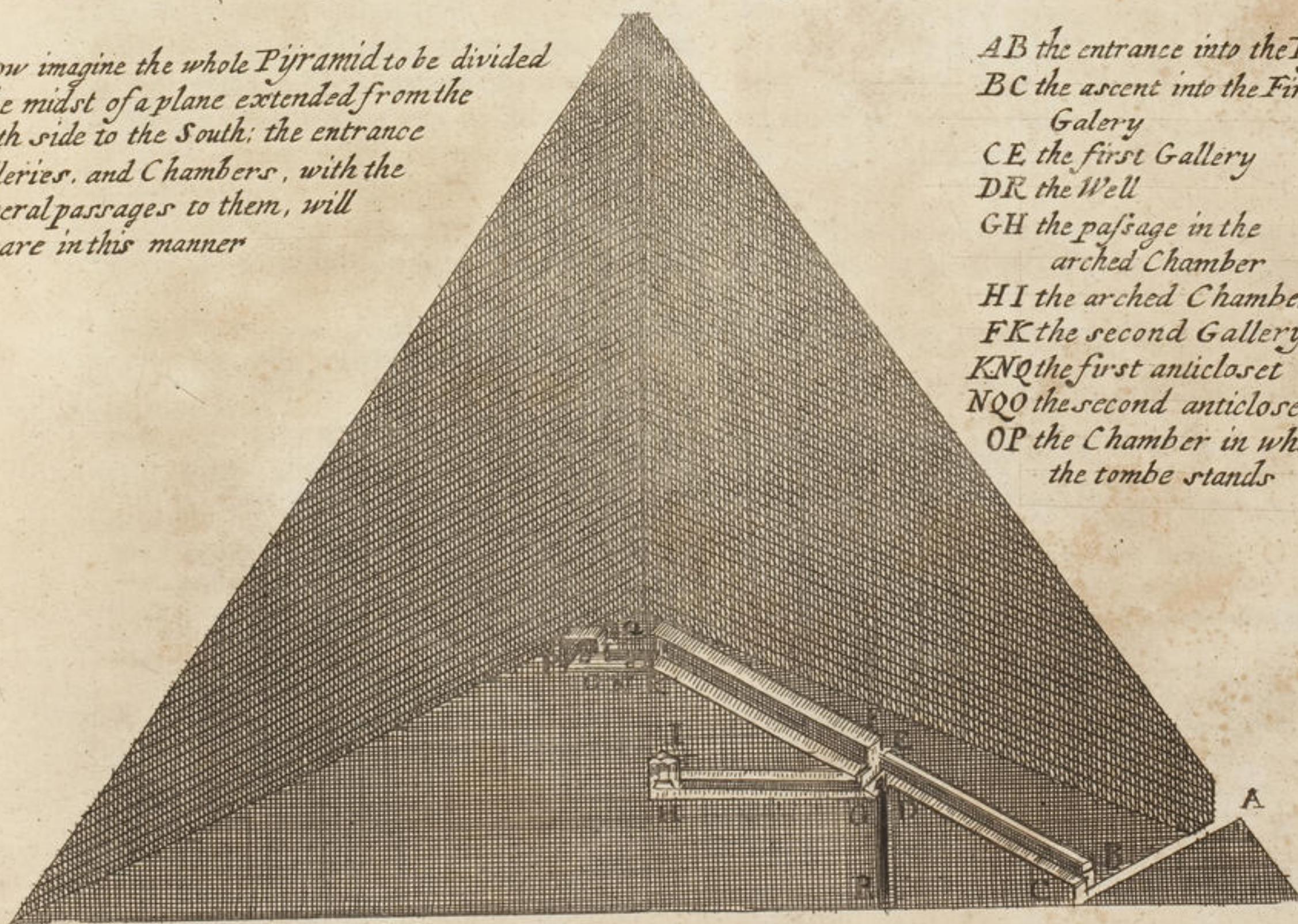


# The outside of the first Pyramid



# The inside of the first and fairest Pyramid

If you imagine the whole Pyramid to be divided in the midst of a plane extended from the North side to the South; the entrance Galleries, and Chambers, with the Several passages to them, will appear in this manner



AB the entrance into the Pyramid  
BC the ascent into the First Gallery  
CE the first Gallery  
DR the Well  
GH the passage in the arched Chamber  
HI the arched Chamber  
FK the second Gallery  
KNQ the first anticloset  
NQO the second anticloset  
OP the Chamber in which the tombe stands



feet, or six hundred twenty-five Roman ; and <sup>g</sup> *Pliny* equals it to 10 CCC LXXXIII. That of *Diodorus Siculus*, in my judgment, comes nearest to the truth <sup>h</sup>, and may serve in some kind to confirm those proportions, which in another discourse I have assigned to the *Grecian* measures. For, measuring the north side of it, at the *basis*, by an exquisite *radius* of ten feet in length, taking two several stations, as mathematicians use to do, when any obstacle hinders their approach, I found it to be six hundred ninety-three feet, according to the *English* standard ; which quantity is somewhat less than that of *Diodorus*. The rest of the sides were examined by a line, for want of an even level, and a convenient distance to place my instruments, both which the *area* on the former side afforded.

The altitude of this pyramid was long since measured by *Thales Milesius*, who, according to <sup>i</sup> *Tatianus Assyrius*, lived about the fiftieth olympiad : but his observation is no where by the antients expressed. Only <sup>k</sup> *Pliny* tells us of a course proposed by him, how it might be found, and that is by observing such an hour, when the shadow of the body is equal to its height : a way, at the best, by reason of the faintness, and scattering of the extremity of the shadow in so great an altitude, uncertain, and subject to error. And yet <sup>l</sup> *Diogenes Laertius*, in the life of *Thales*, hath the same story from the authority of *Hieronymus* : *Hieronymus reports, that he measured the Pyramids by their shadow, marking when they are of an equal quantity*. Wherefore I shall pass by his, and give my own observations. The altitude is something defective of the latitude ; though in <sup>m</sup> *Strabo's* computation it exceeds ; but <sup>n</sup> *Diodorus* rightly acknowledges it to be less ; which, if we measure by its perpendicular, is four hundred ninety-nine feet ; but if we take it as the Pyramid ascends inclining, (as all such figures do) then is it equal, in respect of the lines subtending the several angles, to the latitude of the *basis*, that is, to six

hundred ninety-three feet. With reference <sup>GREAVES.</sup> to this great altitude, *Statius* calls them,

—audacia saxa  
Pyramidum —

And <sup>p</sup> *Tacitus*, *Instar montium eductæ Pyramides*.

<sup>q</sup> *Julius Solinus* goes farther yet : *The Pyramids are sharp-pointed towers in Egypt, exceeding all height which may be made by hand*. <sup>r</sup> *Ammianus Marcellinus*, in his expression, ascends as high : *The Pyramids are towers erected all together, exceeding the height which may be made by man ; in the bottom they are broadest, ending in sharp points a-top ; which figure is therefore, by geometricians, called pyramidal, because in the similitude of fire it is sharpened into a cone, as we speak*.

<sup>s</sup> *Propertius*, with the liberty of a poet, in an hyperbole, flies higher yet :

*Pyramidum sumptus ad sidera ducti.*

And the <sup>t</sup> *Greek Epigrammatist*, in a transcendent expression, is no way short of him :

Πυραμίδες δ' ἔτι νῦν Νειλώϊδες ἀστρά μετῶπα  
Κύρσσι χρυσέῳ ἀστράσι Πανιάδων.

What excessive heights these fancied to themselves, or borrowed from the relations of others, I shall not now examine. This I am certain of, that the shaft or spire of *Paul's* in *London*, before it was casually burnt, being as much, or somewhat more, than the altitude of the tower now standing, did exceed the height of this Pyramid. For <sup>u</sup> *Camden* describes it, in his *Elizabetha*, to be in a perpendicular five hundred and twenty feet from the ground : and in his <sup>w</sup> *Britannia*, to have been somewhat more, 10 XXXIV feet ; whereof the tower CCLX, and the Pyramid on the top CCLXXIV. See *Godw. de præsul.* 229.

If we imagine upon the sides of the *basis*, which is perfectly square, four equila-

<sup>g</sup> Plin. l. 36. c. 12. *Amplissima octo jugera obtinent solz, quatuor angulorum paribus intervallis, per octingentos octoginta tres pedes, singulorum laterum.*

<sup>h</sup> For the exact dimensions of this Pyramid, see miscellaneous observations upon authors antient and modern, pag. 119. & seq. <sup>i</sup> Tatiani Orat. contra Græcos.

<sup>k</sup> Plin. 36. c. 12. *Mensuram altitudinis earum, omniumque similium deprehendere, invenit Thales Milesius, umbram metiendo, quâ horâ par esse corpori solet.*

<sup>l</sup> Diog. Laert. in vitâ Thaletis, l. 1. *Ὁ δὲ Ἱερώνυμος καὶ ἐμμετρεῖσθαι φησὶν αὐτὸν τὰς πυραμίδας, ἐκ τῆς σκιάς παραληψάσθαι ὅτε ἡμῖν ἰσομεγέθεις εἰσὶ.*

<sup>m</sup> Strabo, lib. 17. *Εἰσὶ γὰρ σάδιστα αἱ τὸ ὕψος.* Whereas the breadth he reckons less than a stadium.

<sup>n</sup> Diodor. lib. 1. *Τὸ δὲ ὕψος ἔχει πλείω τῶν ἑξ πλεθρῶν.* But to the breadth he assigns seven plethra.

<sup>o</sup> Stat. l. 5. Sylv. 3.

<sup>p</sup> Tacit. Annal. l. 2.

<sup>q</sup> *Pyramides sunt turres in Ægypto, fastigiata ultra*

*excelsitatem omnem, quâ manû fieri potest.* Jul. Solin. Polyh. c. 45.

<sup>r</sup> Ammian. Marcell. l. 21.

<sup>s</sup> Propertius, l. 3. Eleg. 1.

<sup>t</sup> Græc. Epigram. l. 4. Francofurti 1600. cum Annot. Brodæi.

<sup>u</sup> *Pyramis pulcherrima cathedralis ecclesia S. Pauli, qua singulari urbis ornameto in suspiciendam edita altitudinē m. DXX scilicet pedes à solo, & CCLX à turre quadratâ, cui imposita erat è materiâ lignâ plumbo vestitâ, de cælo prope fastigium tacta deflagavit.* Camdeni Elizabetha.

<sup>w</sup> Camd. Brit. in Middlesex.



**GREAVES.** teral triangles mutually inclining, till they all meet on high as it were in a point, (for so the top seems to them which stand below) then shall we have a true notion of the just dimension and figure of this Pyramid; the perimeter of each triangle comprehending two thousand seventy-nine feet, (besides the latitude of a little plain or flat on the top) and the perimeter of the basis two thousand seven hundred seventy-two feet. Whereby the whole area of the basis (to proportion it to our measures) contains four hundred eighty thousand two hundred forty-nine square feet, or eleven *English* acres of ground, and 1089 of 43560 parts of an acre. A proportion so monstrous, that if the ancients did not attest as much, and some of them describe it to be more, this age would hardly be induced to give credit to it. But *Herodotus* describing each side to contain eight hundred feet, the area must of necessity be greater than that by me assigned, the sum amounting to six hundred and forty thousand; or computing it as *Diodorus Siculus* doth, the area will comprehend four hundred and ninety thousand feet: and in the calculation of *Pliny*, if we shall square eight hundred eighty-three, (which is the number allotted by him to the measure of each side) the product seven hundred seventy-nine thousand six hundred eighty-nine will much exceed both that of *Herodotus*, and this of *Diodorus*: though certainly *Pliny* is much mistaken, in assigning the measure of the side to be eight hundred eighty-three feet, and the basis of the Pyramid to be but eight *jugera*, or *Roman* acres. For if we take the *Roman jugerum* to contain in length two hundred and forty feet, and in breadth one hundred and twenty, as may be evidently proved out of *Varro*, and is expressly affirmed by *Quintilian*, then will the superficies, or whole extension of the *jugerum*, be equal to twenty-eight thousand eight hundred *Roman* feet; with which, if we divide seven hundred seventy-nine thousand six hundred eighty-nine, the result will be twenty-seven *Roman jugera*, and 2089 of 28800 parts of an acre. Wherefore, if we take those numbers eight hundred eighty-three of *Pliny* to be true, then I suppose he writ twenty-eight *jugera*, instead of eight; or else, in his proportion of the side to the area of the basis, he hath err'd.

The ascent to the top of the Pyramid is contrived in this manner: from all the sides without we ascend by degrees; the lowermost degree is near four feet in height, and three in breadth: this runs about the Pyramid in a level; and, at the first, when the stones were intire, which are now somewhat decayed, made on every side of it a long but narrow walk. The second degree is like the first, each stone amounting to almost four feet in height, and three in breadth; it retires inward from the first near three feet, and thus runs about the Pyramid in a level, as the former. In the same manner is the third row placed upon the second; and so in order the rest; like so many stairs rising one above another to the top; which ends not in a point, as mathematical Pyramids do, but in a little flat or square. Of this *Herodotus* hath nowhere left us the dimensions; but *Henricus Stephanus*, an able and deserving man, in his comment, hath supplied it for him; for he makes it to be eight *orgyia*: where, if we take the *orgyia* as both *Hesychius* and *Suidas* do, for the distance between the hands extended at length, that is, for the fathom or six feet, then should it be forty-eight feet in breadth at the top. But the truth is, *Stephanus*, in this particular, whilst he corrects the errors of *Valla's* interpretation, is to be corrected himself. For that latitude which *Herodotus* assigns to the admirable bridge below, (of which there is nothing now remaining) he hath carried up, by a mistake, to the top of the Pyramid. *Diodorus Siculus* comes nearer to the truth, who describes it to be but nine feet. *Pliny* makes the breadth at the top to be twenty-five feet. *Altitudo* (I would rather read it *latitudo*) à *cacumine pedes* XXV. By my measure it is XIII feet, and 280 of 1000 parts of the *English* foot. Upon this flat, if we assent to the opinion of *Proclus*, it may be supposed, that the *Egyptian* priests made their observations in astronomy; and that from hence, or near this place, they first discovered, by the rising of *Sirius*, their *annus novius*, or *canicularis*; as also their *periodus Sothiaca*, or *annus magnus novius*, or *annus Heliacus*, or *annus Dei*, as it is termed by *Censorinus*, consisting of 1460 sidereal years; in which space their *both vagum* and *fixum* came to have the same beginning. That the priests might, near these Pyramids, make their observa-

\* *Jugerum quadratos duos actus habet. Actus quadratus, qui & latus est pedes CXX, & longus totidem. Is modius ac mina appellatur. Varro de Re R. l. 1. c. 10.*

† *Jugeri mensuram CCXL longitudinis pedes esse, dimidique in latitudinem patere, non ferè quisquam est qui ignoret. Quintil. l. 1. c. 10.* \* *Hen. Steph. in 2 lib. Herodoti.*

† *Ὀργυιαὶ ἡ τῶν ἀποστόλων χειρῶν ὄψτασις. Hesych.* † *Ὀργυιαὶ τὰ μετὰ τῶν ἰσθίων χειρῶν. Suid.*

† *Diodor. l. 1.* † *Plin. l. 36. c. 12.* † *Procl. Com. l. 1. in Timæum Platonis.*

† *Censorin. de die natali. Quem Græci novius, Latine caniclarrem vocamus. Hic annus etiam heliacus à quibusdam dicitur, & ab aliis, ὁ δὲ ἐνιαυτός.*



tions, I no way question; this rising of the hill being, in my judgement, as fit a place as any in *Egypt* for such a design; and so much the fitter by the vicinity of *Memphis*. But that these Pyramids were designed for observatories, (whereas by the testimonies of the ancients I have proved before, that they were intended for sepulchres) is no way to be credited upon the single authority of *Proclus*. Neither can I apprehend to what purpose the priests with so much difficulty should ascend so high, when below with more ease, and as much certainty, they might from their own lodgings hewn in the rocks, upon which the Pyramids are erected, make the same observations. For, seeing all *Egypt* is but as it were one continued plain, they might from these cliffs have, over the plains of *Egypt*, as free and open a prospect of the heavens, as from the tops of the Pyramids themselves. And therefore *Tully* writes more truly: *Ægyptii, aut Babylonii, in camporum patentium æquoribus habitantes, cum ex terrâ nihil emeretur, quod contemplationi cæli officere posset, omnem curam in siderum cognitione posuerunt.* The top of this Pyramid is covered not with <sup>h</sup> one or <sup>i</sup> three massy stones, as some have imagined, but with nine, besides two which are wanting at the angles. The degrees by which we ascend up, (as I observed in measuring many of them) are not all of an equal

depth; for some are near four feet, others want of three; and these, the higher we ascend, do so much the more diminish: neither is the breadth of them alike; the difference in this kind, being as far as I could conjecture, proportionable to their depth. And therefore a right line, extended from any part of the basis without to the top, will equally touch the outward angle of every degree. Of these it was impossible for me to take an exact measure, since in such a revolution of time, if the inner parts of the Pyramid have not lost any thing of their first perfection, as being not exposed to the injury of the <sup>k</sup> air, and fall of rains; yet the outward parts, that is, these degrees or rows of stone, have been much wasted and impaired by both. And therefore they cannot conveniently now be ascended, but either at the south side, or at the east angle, on the north: They are well stiled by *Herodotus*, *Βασιδεις*, that is, little altars: for in the form of altars they rise one above another to the top. And these are all made of massy and polished stones, hewn, according to *Herodotus* and *Diodorus*, out of the *Arabian* mountains, which bound the upper part of *Egypt*, or that above the *Delta* on the east, as the *Libyan* mountains terminate it on the west, being so vast, that the breadth and depth of every step is one single and intire stone. The relation of <sup>l</sup> *Herodotus*,

<sup>g</sup> Cicero de Divin. l. i.

<sup>h</sup> Les Voyages de Seign. Villamont.

<sup>i</sup> Sandys's travels.

<sup>k</sup> The air of *Egypt* is confessed by the ancients to be often full of vapours; which appears both by the great dews, that happen after the deluge of *Nilus* for several months; as also in that I have discovered at *Alexandria*, in the winter-time, several obscure stars in the constellation of *Ursa major*, not visible in *England*; the which could not be discerned, were there not a greater refraction at that place than with us, and consequently a greater condensation of the medium, or air, as the opticks demonstrate. But I cannot sufficiently wonder at the ancients, who generally deny the fall of rain in *Egypt*. *Plato*, in his *Timæus*, speaking of *Egypt*, where he had lived many years, writes thus: *Κατὰ δὲ τὴν χώραν ὅτε τότε ἔτε ἄλλοτε, ἀνέθεν ἐστὶ τὰς ἀρούρας ὕδωρ ἐπιπρῆ.* *Pomponius Mela*, in express terms, relates, that *Egypt* is *terra expertis imbrium, mirè tamen fertilis*. Whereas for two months, namely *December* and *January*, I have not known it rain so constantly, and with so much violence, at *London*, as I found it do at *Alexandria*; the winds continuing north north-west; which caused me to keep a diary as well of the weather, as I did of my observations in astronomy: and not only there, but also at *Grand Cairo*, my very noble and worthy friend, *Sir William Paslon*, at the same time, observed, that there fell much rain. And so likewise, about the end of *March* following, being at the *mumies*, somewhat beyond the Pyramids, to the south, there fell a gentle rain for almost a whole day. But it may be; the ancients mean the upper parts of *Egypt* beyond *Thebes*, about *Siene*, and near the *Catadupa*, or cataracts of *Nilus*, and not the lower parts; where I have been told by the *Egyptians* that it seldom rains. And therefore *Seneca* (*lib. 4. Natur. Quæst.*) seems to have writ true, *In eâ parte quæ in Æthiopianam vergit* (speaking of *Egypt*) *aut nulli imbres sunt, aut rari.* But where he after says, *Alexandriâ nives non cadunt*, it is false: for, at my being there in *January*, at night it snowed. However, farther to the south than *Egypt*, between the tropicks, and near the line, in *Habassia*, or *Ethiopia*, every year, for many weeks, there falls store of rain, as the *Habassines* themselves at *Grand Cairo* relate. Which may be confirmed by *Josephus Acosta*, *lib. 2. de Naturâ Orbis novi*, where he observes in *Peru*, and some other places, (lying in the same parallel with those of *Ethiopia*) that they have abundance of rains. This then is the true cause of the inundation of *Nilus* in the summer-time, being then highest, when other rivers are lowest; and not those which are alleged by *Herodotus*, *Diodorus*, *Plutarch*, *Aristides*, *Heliodorus*, and others; who are extremely troubled to give a reason of the inundation, imputing it either to the peculiar nature of the river, or to the obstruction of the mouth of it by the *Etesia*; or to the melting of snows in *Ethiopia* (which, I believe, seldom fall in those hot countries, where the natives, by reason of the extreme heats, are all black; and where, if we credit *Seneca*, *argentum replumbatur*, silver is melted, by the scorching heats); or to some such other reasons of little weight. In *Diodorus*, I find *Agatharchides Cnidius* to give almost the same reason assigned by me; but those times gave little credit to his assertion; yet *Diodorus* seems to assent to it (*Diod. lib. 1.*): *Agatharchides Cnidius hath come nearest to the truth; for he saith, Every year, in the mountains about Ethiopia, there are continual rains from the summer solstice to the autumnal equinox, which cause the inundation.* The time of this is accounted generally so certain, that I have seen the *Egyptian* astronomers to put it down, many years before, in their *Ephemerides*, That such a day of such a month, the *Nilus* begins to rise.

<sup>l</sup> Οὐδὲς τῶν λίθων τεύκησιν ποδῶν ἐλάσσαν. *Herod. l. 2.*

and



GREAVES.

and <sup>m</sup> *Pomponius Mela*, is more admirable, who make the least stone in this Pyramid to be thirty feet. And this I can grant in some, yet surely it cannot be admitted in all, unless we interpret their words, that the least stone is thirty square, or, to speak more properly, thirty cubical feet; which dimension, or a much greater, in the exterior ones, I can, without any difficulty, admit. The number of these steps is not mentioned by the ancients, and that caused me, and two that were with me, to be the more diligent in computing them, because by modern writers, and some of those too of repute, they are described with much diversity and contrariety. The degrees, saith <sup>n</sup> *Bellonius*, are about two hundred and fifty; each of them single contains in height forty-five digits; at the top it is two paces broad. For this I take to be the meaning of what *Clusius* renders thus: *A basi autem ad cacumen ipsius supputationem facientes, comperimus circiter CCL gradus, singuli altitudinem patent v solearum calcei 1x pollicum longitudines; in fastigio duos passus habet.* Where I conceive his *passus* is in the same sense to be understood here above, as not long before he explains himself in describing the *basis* below, which, in his account, is CCCXXIV *passus paululum extensis cruribus*. <sup>o</sup> *Albertus Lewenstainius* reckons the steps to be two hundred and sixty, each of them a foot and a half in depth. *Johannes Helfricus* counts them to be two hundred and thirty. <sup>p</sup> *Sebastius Serlius*, upon a relation of *Grimano*, the patriarch of Aquileia, and afterwards cardinal, (who, in his travels in Egypt, measured these degrees) computes them to be two hundred and ten; and the height of every step to be equally three palms and an half. It would be but lost labour, to mention the different and repugnant relations of several others: that which, by experience, and by a diligent calculation, I and two others found, is this, that the number of degrees, from the bottom to the top, is two hundred and seven; though one of them, in descending, reckoned two hundred and eight.

Such as please, may give credit to those fabulous traditions of <sup>q</sup> some, that a Turkish

archer standing at the top cannot shoot beyond the bottom, but that the arrow will necessarily fall upon these steps. If the Turkish bow (which, by those figures that I have seen in ancient monuments, is the same with that of the *Parthians*, so dreadful to the *Romans*) be but as swift and strong as the *English*; as surely it is much more, if we consider with what incredible force some of them will pierce a plank of six inches in thickness (I speak what I have seen); it will not seem strange, that they should carry twelvescore in length; which distance is beyond the *basis* of this Pyramid.

The same credit is to be given to those reports of the ancients, that this Pyramid, and the rest, cast no shadows. <sup>r</sup> *Solinus* writes expressly, *Mensuram umbrarum egressæ nullas habent umbras.* And <sup>s</sup> *Ausonius*:

— Quadro cui in fastigia cono  
Surgit, & ipsa suas consumit Pyramis umbras.

<sup>t</sup> *Ammianus Marcellinus* hath almost the same relation: *Umbras quoque mechanicâ ratione consumit.* Lastly, <sup>u</sup> *Cassiodorus* confirms the same, *Pyramides in Ægypto, quarum in suo statu se umbra consumens, ultra constructionis spatia nullâ parte respicitur.* All which, in the winter-season, I can in no sort admit to be true: for, at that time, I have seen them cast a shadow at noon. And if I had not seen it, yet reason, and the art of measuring altitudes by shadows, and, on the contrary, of knowing the length of shadows by altitudes, doth necessarily infer as much. Besides, how could *Thales Milesius*, above two thousand years since, have taken their height by shadows, according to *Pliny* and *Laertius*, as we mentioned before, if so be these Pyramids have no shadows at all? To reconcile the difference, we may imagine, *Solinus*, *Ausonius*, *Marcellinus*, and *Cassiodorus*, mean in the summer-time; or, which is nearer the truth, that, almost for three quarters of the year, they have no shadows: and this I grant to be true at midnight.

<sup>m</sup> *Pyramides tricenâ pedum lapidibus exstructa.* Pomp. Mel. l. 1. c. 9:

c. 42.

<sup>n</sup> *Bellonius*, lib. 2. Observ. <sup>o</sup> *Albertus Lewenstainius* gradus ad cacumen numerat CCLX singulos sesquipedali altitudine, *Johannes Helfricus* CCXXX. *Raderus*, in *Martial. Epigr.* Barbara Pyramidum sileat miracula Memphis, &c. <sup>p</sup> Il numero de pezzidalla basa fino alla sommità sono da CCX, è sono turtid' una altezza talmente che l'altezza di tutta la massa è quanto la sua basa. *Sebast. Serl.* lib. 3. delle Antichità.

<sup>q</sup> *Bellon.* Observ. lib. 2. cap. 42. & alii. Peritissimus atque validissimus sagittarius in ejus fastigio existens, atque sagittam in aërem emittens, tam valide eam ejaculari non poterit, ut extra molis basim decidat, sed in ipsos gradus cadet; adeo vastæ magnitudinis, uti diximus, est hæc moles. *Bellon.*

<sup>r</sup> *Jul. Solin.* Polyh. c. 45.

Var. 7. Formula 15.

<sup>s</sup> *Auson.* Edyllio 3.

<sup>t</sup> *Ammian. Marcel.* lib. 22.

<sup>u</sup> *Cassiodor.*



## A Description of the Inside of the First PYRAMID.

HAVING finished the description of the greater Pyramid, with the figure and dimensions of it, as they present themselves to the view without; I shall now look inwards, and lead the reader into several spaces and partitions within: of which if the ancients have been silent, we must chiefly impute it to a reverend and awful regard, mixed with superstition, in not presuming to enter those chambers of death, which religion and devotion had consecrated to the rest and quiet of the dead. Wherefore <sup>a</sup> Herodotus mentions no more, but only in general, that *some secret vaults are hewn in the rock under the Pyramid.* Diodorus Siculus is silent; though both enlarge themselves in other particulars less necessary. <sup>b</sup> Strabo also is very concise, whose whole description, both of this and of the second Pyramid, is included in this short expression: *Forty stadia from the city (Memphis) there is a certain brow of an hill, in which are many Pyramids, the sepulchres of kings: three of them are memorable. Two of these are accounted amongst the seven miracles of the world: each of these are a furlong in height: the figure is quadrilateral; the altitude somewhat exceeds each side, and the one is somewhat bigger than the other. On high, as it were, in the midst between the sides, there is a stone that may be removed, which being taken out, there is an oblique (or shelving) entrance (for so I render that which by him is termed σείριγξ σκολιά) leading to the tomb.* <sup>c</sup> Pliny expresses nothing within, but only a well (which is still extant) of eighty-six cubits in depth; in which, he probably imagines, by some secret aqueduct, the water of the river Nilus to be brought. Aristides, in his oration intituled Αἰγυπτιῶν, upon a misinformation of the Egyptian priests, makes the foundation of the structure to have descended as far below, as the altitude ascends above; of which I see no necessity, seeing all of them are founded upon rocks. His words are these: <sup>d</sup> Now as with admiration we behold the tops of the Pyramids, but that which is as much more under-ground, opposite to it, we are ig-

norant of (*I speak what I have received from the priests*). And this is that which hath been delivered to us by the ancients; which I was unwilling to pretermitt, more out of reverence of antiquity, than out of any special satisfaction. The Arabian writers, especially such as have purposely treated of the wonders of Egypt, have given us a more full description of what is within this Pyramid: but that hath been mixed with so many fictions of their own, that the truth hath been darkened, and almost quite extinguished, by them. I shall put down that which is confessed by them to be the most probable relation, as is reported by Ibn Abd Albokm, whose words out of the Arabick are these: *The greatest part of chronologers agree, that he which built the Pyramids, was Saurid Ibn Salhouk, king of Egypt, who lived three hundred years before the flood. The occasion of this was, because he saw in his sleep, that the whole earth was turned over with the inhabitants of it, the men lying upon their faces, and the stars falling down, and striking one another with a terrible noise; and, being troubled, he concealed it. After this he saw the fixed stars falling to the earth, in the similitude of white fowl, and they snatched up men, carrying them between two great mountains; and these mountains closed upon them, and the shining stars were made dark. Awaking with great fear, he assembled the chief priests of all the provinces of Egypt, an hundred and thirty priests, the chief of them was called Aclim-mum. Relating the whole matter to them, they took the altitude of the stars, and, making their prognostication, foretold of a deluge. The king said, Will it come to our country? They answered, Yea, and will destroy it. And there remained a certain number of years for to come, and he commanded in the mean space to build the Pyramids, and a vault to be made, into which the river Nilus entering, should run into the countries of the West, and into the land Al-Said; and he filled them with <sup>e</sup> telestes, and with strange things, and with riches, and treasures, and the like. He ingraued in them all things that were told*

<sup>a</sup> Herodot. lib. 2.

<sup>b</sup> Strabo, lib. 17.

<sup>c</sup> Plin. l. 36. c. 12.

<sup>d</sup> Νῦν δ' ὡς περ τῶν πυραμίδων τὰς μὲν κορυφὰς ὁρῶντες ἐκπλητίζομεθα· τὸ δ' ἀντίπαλον καὶ ὑπὸ γῆς ἕτερον τοσούτον, ὃν ἠγνόνταί (λέγω δ' αὐτῶν ἱερῶν ἡκούον) &c. Aristid. λέγει Αἰγυπτίους.

<sup>e</sup> Telestes.] The word used by the Arabians is derived from the Greek, ἀποτελεσμα, by an apharefis of ἀπό. By the like apharefis, together with an epenthesis, the Arabians call him Boctonassar, whom Ptolemy names Nabonassar: as by an apharefis, and syncope, the Turks call Constantinople, Stambol, or Istanbol; from whence some of our writers term it Stambol; tho' the Arabians more fully express it by Costantiniya, and Buzantiya; that is, Constantinopolis, and Byzantium. The various significations of τελέσματα, and ἀποτελεσματα, see in Mr. Selden's learned discourse, de Diis Syris; and in Scaliger's annotations in apotelesmaticum Manilii. That which the Arabians commonly mean by telestes, are certain sigilla, or amuleta, made under such and such an aspect or configuration of the stars and planets, with several characters accordingly inscribed.



GRAVES. him by wise men, as also all profound sciences, the names of <sup>†</sup>alakakirs, the uses and hurts of them; the science of astrology, and of arithmetick, and of geometry, and of physick. All this may be interpreted by him that knows their characters and language. After he had given order for this building, they cut out vast columns, and wonderful stones. They fetched massy stones from the Ethiopians, and made with these the foundation of the three Pyramids, fastening them together with lead and iron. They built the gates of them forty cubits under-ground, and they made the height of the Pyramids one hundred royal cubits, which are fifty of ours in these times; he also made each side of them an hundred royal cubits. The beginning of this building was in a fortunate horoscope. After that he had finished it, he covered it with coloured satin, from the top to the bottom; and he appointed a solemn festival, at which were present all the inhabitants of his kingdom. Then he built in the western Pyramid thirty treasuries, filled with store of riches, and utensils, and with signatures made of precious stones, and with instruments of iron, and vessels of earth, and with arms which rust not, and with glass which might be bended, and yet not broken, and with strange spells, and with several kinds of alakakirs, single and double, and with deadly poisons, and with other things besides. He made also, in the east Pyramid, divers celestial spheres and stars, and what they severally operate, in their aspects, and the perfumes which are to be used to them, and the books which treat of these matters. He also put in the coloured Pyramid, the commentaries of the priests, in chests of black marble, and with every priest a book, in which were the wonders of his profession, and of his actions, and of his nature, and what was done in his time; and what is, and what shall be, from the beginning of time, to the end of it. He placed in every Pyramid a treasurer: the treasurer of the westerly Pyramid was a statue of marble-stone, standing upright, with a lance, and, upon his head, a serpent wreathed. Him that came near it, and stood still, the serpent bit of one side, and, wreathing round about his throat, and killing him, returned to his place. He made the treasurer of the east Pyramid an idol of black agate, his eyes open and shining, sitting upon a throne with a lance; when any looked upon him, he heard of one side of him a voice, which took away his sense, so that he fell prostrate upon his face, and ceased not till he died. He made the treasurer of the coloured Pyramid a statue of stone, (called) Albut, sitting: he which looked towards it was drawn

by the statue, till he stuck to it, and could not be separated from it, till such time as he died. The Coptites write in their books, that there is an inscription ingraven upon them, the exposition of which in Arabick is this: I king Saurid built the Pyramids in such and such a time, and finished them in six years: he that comes after me, and says that he is equal to me, let him destroy them in six hundred years: and yet it is known, that it is easier to pluck down, than to build up. I also covered them, when I had finished them, with satin; and let him cover them with mats. After that Almamon the calif entered Egypt, and saw the Pyramids, he desired to know what was within, and therefore would have them opened. They told him, It could not possibly be done. He replied, I will have it certainly done. And that hole was opened for him, which stands open to this day, with fire and vinegar. Two smiths prepared and sharpened the iron, and engines, which they forced in; and there was a great expence in the opening of it: the thickness of the wall was found to be twenty cubits; and when they came to the end of the wall, behind the place they had digged, there was an ewer (or pot) of green emerald: in it were a thousand dinars very weighty; every dinar was an ounce of our ounces: they wondered at it, but knew not the meaning of it. Then Almamon said, Cast up the account, how much hath been spent in making the entrance. They cast it up, and, lo, it was the same sum which they found; it neither exceeded, nor was defective. Within they found a square well: in the square of it there were doors; every door opened into an house (or vault) in which there were dead bodies wrapped up in linen. They found towards the top of the Pyramid, a chamber, in which there was an hollow stone: in it was a statue of stone like a man, and within it a man, upon whom was a breast-plate of gold, set with jewels: upon his breast was a sword of invaluable price, and at his head a carbuncle of the bigness of an egg, shining like the light of the day; and upon him were characters written with a pen, no man knows what they signify. After Almamon had opened it, men entered into it for many years, and descended by the slippery passage, which is in it; and some of them came out safe, and others died. Thus far the Arabians; which traditions of theirs are little better than a romance: and therefore, leaving these, I shall give a more true and particular description, out of mine own experience and observations.

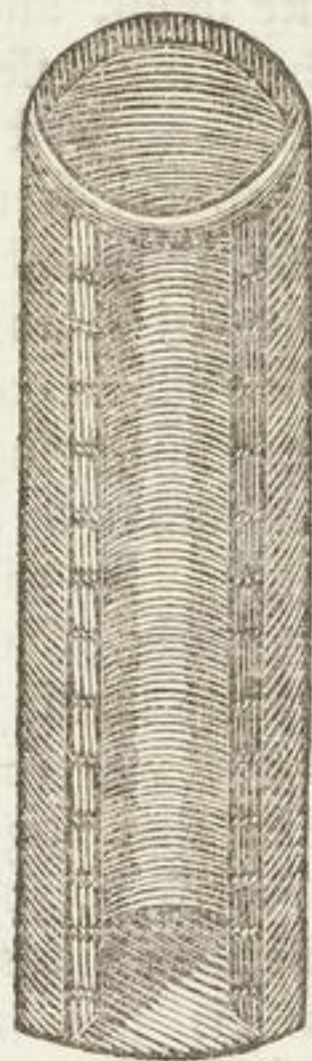
On the north side ascending thirty-eight feet, upon an artificial bank of earth,

<sup>†</sup> Alakakir] Amongst other significations, is the name of a precious stone; and therefore in *Abulfeda* it is joined with *yacut*, a ruby. I imagine it here to signify some magical spell, which it may be was ingraven in this stone.



there is a square and narrow passage leading into the Pyramid, thorough the mouth of which (being equidistant from the two sides of the Pyramid) we enter, as it were, down the steep of an hill declining with an angle of twenty-six degrees. The breadth of this entrance is exactly three feet, and four hundred sixty-three parts of one thousand of the *English* foot: The length of it, beginning from the first declivity, which is some ten palms without, to the utmost extremity of the neck or streight within, where it contracts itself almost nine feet continued, with scarce half the depth it had at the first entrance, (tho' it keep still the same breadth) is ninety-two feet and an half. The structure of it hath been the labour of an exquisite hand, as appears by the smoothness and evenness of the work, and by the close knitting of the joints. A property long since observed, and commended by <sup>e</sup> *Diodorus*, to have run thorough the fabrick of the whole body of this Pyramid. Having passed with tapers in our hands this narrow streight, tho' with some difficulty, (for at the farther end of it we must creep upon our bellies) we land in a place somewhat larger, and of a pretty height, but lying incompased; having been dug away, either by the curiosity or avarice of some, in hopes to discover an hidden treasure; or rather by the command of *Almamon*, the deservedly renowned calif of *Babylon*. By whomsoever it were, it is not worth the inquiry; nor doth the place merit describing, but that I was unwilling to pretermitt any thing, being only an habitation for bats, and those so ugly, and of so large a size, (exceeding a foot in length) that I have not elsewhere seen the like. The length of this obscure and broken space containeth eighty-nine feet: the breadth and height is various, and not worth consideration. On the left hand of this, adjoining to that narrow entrance thorough which we passed, we climb up a steep and massy stone, eight or nine feet in height, where we immediately enter upon the lower end of the first gallery. The pavement of this rises with a gentle acclivity, consisting of smooth and polished marble, and were not smeared with filth, appearing of a white and alabaster colour: the sides and roof, as *Titus Livinius Burretinus*, a *Venetian*, an ingenious young man, who accompanied me thither, observ'd, was of impolished stone, not so hard and compact as that on the pavement, but more soft and tender: the breadth almost five feet, and about the same quantity the height, if he have not mistaken. He like-

wife discovered some irregularity in the breadth, it opening a little wider in some places than in others; but this inequality could not be discerned by the eye, but only by measuring it with a careful hand. By my observation with a line, this gallery contained in length an hundred and ten feet. At the end of this begins the second gallery; a very stately piece of work, and not inferior, either in respect of the curiosity of art, or richness of materials, to the most sumptuous and magnificent buildings. It is divided from the former by a wall, through which stooping, we passed in a square hole, much about the same bigness, as that by which we entered into



the Pyramid, but of no considerable length. This narrow passage lieth level, not rising with an acclivity, as doth the pavement below, and roof above, of both these galleries. At the end of it, on the right hand, is the well, mentioned by *Pliny*; the which is circular, and not square, as the *Arabian* writers describe: the diameter of it exceeds three feet; the sides are lin'd with white marble; and the descent into it is by fastening the hands and feet in little open spaces cut in the sides within, opposite, and answerable to one another in a perpendicular. In the same manner are almost all the wells and passages into the cisterns at *Alexandria* contrived, without stairs or windings, but only with inlets, and square holes on each side within; by which using the feet and hands, one may with ease descend. Many of these cisterns are with open and double arches, the lowermost arch being supported by a row of speckled and *Thebaick* marble pillars, upon the top of which stands a second row, bearing the upper and higher arch: the walls within are covered with a sort of plaister, for the colour white; but of so durable a substance, that neither by time, nor by the water, it is yet corrupted and impaired. But I return from the cisterns and wells there, to this in the Pyramid; which, in <sup>b</sup> *Pliny's* calculation, is eighty-six cubits in depth; and it may be was the passage to those secret vaults mentioned, but not described, by *Herodotus*, that were hewn out of the rock, over which this Pyramid is erected. By my measure, founding it with a line, it contains twenty feet in depth.

<sup>a</sup> *Diod. Sic. lib. 8.*

<sup>b</sup> *In Pyramide maximâ est intus puteus LXXXVI cubitorum: flumen illo admissum arbitrantur. Plin. l. 36. cap. 12.*

The



GREAVES.

The reason of the difference between *Pliny's* observation and mine, I suppose to be this; that since his time it hath almost been dammed up, and choaked with rubbish, which I plainly discovered at the bottom, by throwing down some combustible matter set on fire. Leaving the well, and going on strait upon a level, the distance of fifteen feet, we entered another square passage, opening against the former, and of the same bigness. The stones are very massy, and exquisitely jointed, I know not whether of that glistering and speckled marble I mentioned in the columns of the cisterns at *Alexandria*. This leadeth (running in length upon a level an hundred and ten feet) into an arched vault, or little chamber; which, by reason it was of a grave-like smell, and half-full of rubbish, occasioned my lesser stay. This chamber stands east and west; the length of it is less than twenty feet, the breadth about seventeen, and the height less than fifteen. The walls are intire, and plaistered over with lime; the roof is covered with large smooth stones, not lying flat, but shelving, and meeting above in a kind of arch, or rather an angle. On the east side of this room, in the middle of it, there seems to have been a passage leading to some other place. Whether this way the priests went into the hollow of that huge *sphinx*, as *Strabo* and *Pliny* term it, or *androsphinx*, as *Herodotus* calls such kinds, (being by *Pliny's* calculation cii feet in compass about the head, in height lxi, in length cxliii: and, by my observation, made of one intire stone) which stands not far distant without the Pyramid, south-east of it, or into any other private retirement, I cannot determine; and it may be too this served for no such purpose, but rather as a *theca* or *nichio*, as the *Italians* speak, wherein some idol might be placed; or else for a piece of ornament (for it is made of polished stone) in the architecture of those times, which ours may no more understand, than they do the reason of the rest of those strange proportions, that appear in the passages and inner rooms of this Pyramid. Returning back the same way we came, as soon as we are out of this narrow and square passage, we climb over it; and, going strait on, in the trace of the second gallery, upon a shelving pavement (like that of the first) rising with an angle of twenty-six degrees, we at length came to another partition. The length of the gallery, from the well below to this partition above, is an hundred fifty and four feet; but if we measure the pavement of the floor, it is somewhat less, by reason of a little vacuity some fifteen feet

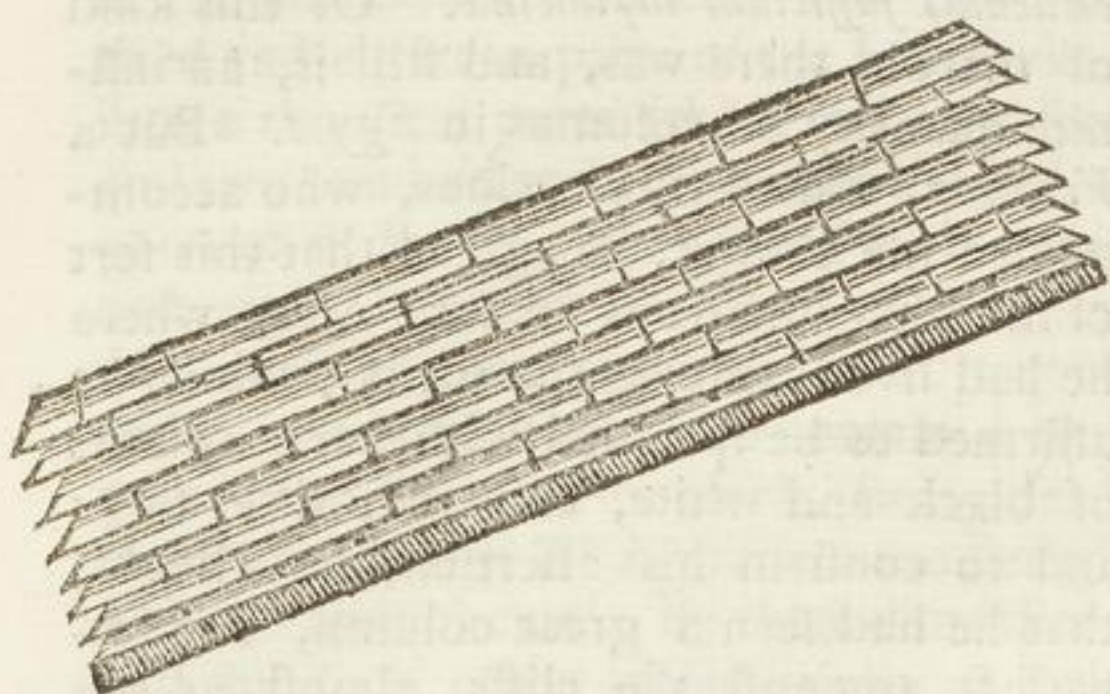
in length) as we described before, between the well and the square hole we climbed over. And here, to reassume some part of that which hath been spoken, if we consider the narrow entrance at the mouth of the Pyramid, by which we descend; and the length of the first and second galleries, by which we ascend; all of them lying as it were in the same continued line, and leading to the middle of the Pyramid; we may easily apprehend a reason of that strange echo within, of four or five voices, mentioned by *Plutarch*, in his fourth book *de Placitis Philosophorum*; or rather of a long-continued sound; as I found by experience, discharging a musquet at the entrance. For the sound, being shut in, and carried in those close and smooth passages, like as in so many pipes or trunks, finding no issue out, reflects upon itself, and causes a confused noise and circulation of the air, which by degrees vanishes, as the motion of it ceases. This gallery, or *corridore*, (or whatsoever else I may call it) is built of white and polished marble, the which is very evenly cut in spacious squares, or tables. Of such materials as is the pavement, such is the roof, and such are the side-walls, that flank it: the coagmentation or knitting of joints is so close, that they are scarce discernible to the eye; and that which adds a grace to the whole structure, tho' it makes the passage more slippery and difficult, is the acclivity and rising of the ascent. The height of this gallery is twenty-six feet, the breadth is six feet, and eight hundred seventy parts of the foot divided into a thousand, of which three feet, and four hundred thirty-six of a thousand parts of a foot, are to be allowed for the way in the midst; which is set and bounded on both sides with two banks (like benches) of sleek and polished stone; each of these hath one foot seven hundred seventeen of a thousand parts of a foot in breadth, and as much in depth. Upon the top of these benches near the angle, where they close, and join with the wall, are little spaces cut in right-angled parallel figures, set on each side opposite to one another; intended, no question, for some other end than ornament. In the casting and ranging of the marbles in both the side-walls, there is one piece of architecture, in my judgment, very graceful; and that is, that all the courses, or ranges, which are but seven (so great are those stones) do set and flag over one another about three inches; the bottom of the uppermost course over-setting the higher part of the second, and the lower part of this overflagging the top of the third, and so in order the rest, as

<sup>1</sup> Plin. l. 36. cap. 12.<sup>2</sup> Ἐν γὰρ ταῖς κατὰ Αἰγυπτίαν πυραμίδων ἐνδοῦ φωνὴ μὲν βαρυγυμνὴ τέτταται ἢ καὶ πέντε ἡχοὺς ἀπεργάζεται. Plut. lib. 4. de Philof. Plac. cap. 20.

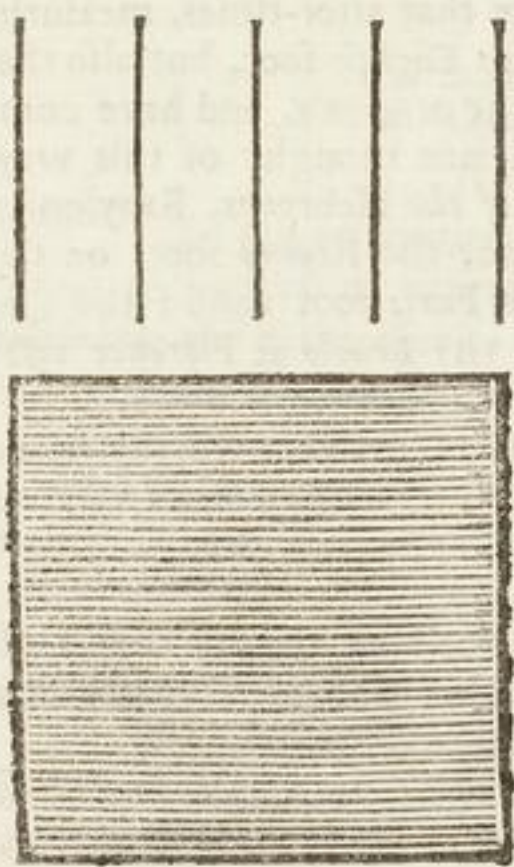
they



they descend. Which will better be conceived by the representation of it to the eye in this figure, than by any other description.



Having passed this gallery, we enter another square hole, of the same dimensions with the former, which brings us into two *anticamerettes*, as the *Italians* would call them, or *ante-closets* (give me leave, in so unusual a structure, to frame some <sup>1</sup> unusual terms) lined with a rich and speckled kind of *Thebaick* marble. The first of these hath the dimensions almost equal to the second. The second is thus proportioned: The area is level, the figure of it is oblong, the one side containing seven feet, the other three and an half; the height is ten feet. On the east and west sides, within two feet and half of the top, which is somewhat larger than the bottom, are three cavities, or little seats, in this manner:



This inner ante-closet is separated from the former, by a stone of red speckled marble, which hangs in two mortices (like the leaf of a sluice) between two walls, more than three feet above the pavement, and wanting two of the roof. Out of this closet we enter another square hole, over which are five lines cut parallel, and perpendicular, in this manner:

Besides these, I have not observed any other sculptures, or engravings, in the whole Pyramid: and therefore it may justly be wondered, whence the *Arabians* borrowed those traditions I before related, that all sciences are inscribed within in hieroglyphicks: and as justly it may be questioned, upon what authority *Dio*, or his epitomizer *Xiphilinus*, reports, that *Cornelius Gallus* (whom <sup>m</sup> *Strabo* more truly names *Aelius Gallus*, with whom he travelled into *Egypt*, as a friend and companion) <sup>n</sup> *engraved in the Pyramids his victories*, unless we understand some other Pyramids not now existent. This square passage is of the same wideness and dimensions as the rest, and is in length near nine feet, (being all of *Thebaick* marble, most exquisitely cut) which lands us at the north end of a very sumptuous and well-proportioned room. The distance from the end of the second gallery to this entry, running upon the same level, is twenty-four feet. This rich and spacious chamber, in which art may seem to have contended with nature, the curious work being not inferior to the rich materials, stands as it were in the heart and centre of the Pyramid, equidistant from all the sides, and almost in the middle between the *basin* and the top. The floor, the sides, the roof of it, are all made of vast and exquisite tables of *Thebaick* marble, which, if they were not veiled and obscured by the steam of tapers, would appear glistening and shining. From the top of it descending to the bottom, there are but six ranges of stone, all which, being respectively sized to an equal height, very gracefully in one and the same altitude, run round the room. The stones, which cover this place, are of a strange and stupendous length, like so many huge beams lying flat, and traversing the room, and withal supporting that infinite mass, and weight of the Pyramid above. Of these there are nine, which cover the roof; two of them are less by half in breadth than the rest; the one at the east end, the other at the west. The length of this <sup>o</sup> chamber on the south side, most accurately taken at the joint, or line, where the first and second row of stones meet, is thirty-four *English* feet, and three hundred and eighty parts of the foot divided into a thousand (that is, thirty-four feet, and three hundred and eighty of a thousand parts of a foot). The breadth of the

<sup>1</sup> *Sunt enim rebus novis nova ponenda nomina.* Cicero, lib. 1. de Naturâ Deorum.

<sup>m</sup> *Strabo*, lib. 17.

<sup>n</sup> *Xiphil.* in *Cæs. Aug.* Τα ἔργα ὅσα ἐποίησεν, ἐς πυραμίδας ἐτέτυξε.

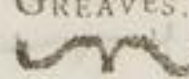
<sup>o</sup> These proportions of the chamber, and those which follow, of the length and breadth of the hollow part of the tomb, were taken by me with as much exactness as it was possible to do; which I did so much the more diligently, as judging this to be the fittest place for the fixing of measures for posterity. A thing which hath been much desired by learned men; but the manner how it might be exactly done, hath been thought of by

Nº 82. VOL. II.

8 A

none.



 GREAVES. the west side at the joint, or line, where the first and second row of stones meet, is seventeen feet, and a hundred and ninety parts of the foot divided into a thousand (that is, seventeen feet, and a hundred and ninety of a thousand parts of a foot). The height is nineteen feet and a half.

Within this glorious room (for so I may justly call it) as within some consecrated oratory, stands the monument of *Cheops*, or *Chemmis*, of one piece of marble, hollow within, and uncovered at the top, and sounding like a bell. Which I mention not as any rarity, either in nature, or in art, (for I have observed the like sound, in other tombs of <sup>p</sup> marble cut hollow like this) but because I find modern authors to take notice of it as a wonder. Some write, that the body hath been removed hence; whereas <sup>a</sup> *Diodorus* hath left, above sixteen hundred years since, a memorable passage concerning *Chemmis* the builder of this Pyramid, and *Cephren*, the founder of the next adjoining: *Altho'* (saith he) *these kings intended these for their sepulchres, yet it happened, that neither of them were buried there: for the people, being exasperated against them, by reason of the toilsomeness of these works, and for their cruelty and oppression, threatened to tear in pieces their dead bodies, and with ignominy to throw them out of their sepulchres: wherefore both of them, dying, commanded their friends privately to bury them, in an obscure place.* This monument, in respect of the nature and quality of the stone, is the same with which the whole room is lined; as, by breaking a little fragment of it, I plainly discovered, being a speckled kind of marble, with black, and white, and red spots, as it were equally mixed, which some writers call *Thebaick* marble: tho' I conceive it to be that sort of por-

phyry, which <sup>r</sup> *Pliny* calls *leucostictos*, and describes thus: *Rubet porphyrites in eadem Aegypto: ex eo candidis intervenientibus punctis leucostictos appellatur. Quantislibet motibus cadendis sufficiunt lapidicinae.* Of this kind of marble there was, and still is, an infinite quantity of columns in *Egypt*. But a *Venetian*, a man very curious, who accompanied me thither, imagined that this sort of marble came from mount <sup>s</sup> *Sina*, where he had lived among the rocks; which he affirmed to be speckled with party-colours of black and white, and red, like this: and to confirm his assertion, he alleg'd, that he had seen a great column, left imperfect amongst the cliffs, almost as big as that huge and admirable <sup>t</sup> *Corinthian pillar, standing to the south of Alexandria*; which, by my measure, is near four times as big as any of those vast *Corinthian pillars*, in the *Porticus* before the *Pantheon* at *Rome*; all which are of the same coloured marble with this monument; and so are all the obelisks with hieroglyphicks, both in *Rome* and *Alexandria*. Which opinion of his doth well correspond with the tradition of *Aristides*, who reports, that in *Arabia* there is a quarry of excellent porphyry. The figure of this tomb, without, is like an altar; or, more nearly to express it, like two cubes finely set together, and hollowed within; it is cut smooth and plain, without any sculpture and engraving, or any relevy and embossment. The exterior superficies of it contains in length seven feet three inches and an half. <sup>u</sup> *Bellonius* makes it twelve feet, and <sup>x</sup> *monsieur de Breves* nine; but both of them have exceeded. In depth it is three feet three inches and three quarters, and is the same in breadth. The hollow part within, is in length, on the west side, six feet; and

none. I am of opinion, that as this Pyramid has stood three thousand years almost, and is no whit decayed within, so it may continue many thousand years longer: and therefore that after-times, measuring these places by me assigned, may hereby not only find out the just dimensions of the *English* foot, but also the feet of several nations in these times; which in my travels abroad I have taken from the originals, and have compared them at home with the *English* standard. Had some of the ancient mathematicians thought of this way, these times would not have been so much perplexed, in discovering the measures of the Hebrews, Babylonians, Egyptians, Greeks, and other nations. Such parts as the *English* foot contains 1000, the *Roman* foot, on *Cossutius's* monument, (commonly called by writers, *Pes Colatianus*) contains 967; the *Paris* foot 1068; the *Spanish* foot 920; the *Venetian* foot 1062; the *Rhinland* foot, or that of *Snellius*, 1033; the *Braccio* at *Florence* 1913; the *Braccio* at *Naples* 2100; the *Derah* at *Cairo* 1824; the greater *Turkish* Pike at *Constantinople* 2200.

<sup>p</sup> As appears by a fair and ancient monument brought from *Smyrna*, to my very worthy friend *Edward Rolt*, Esq; which stands in his park at *Woolwich*.

<sup>q</sup> *Diod. Sic. lib. 1. Τῶν δὲ βασιλέων τῶν κατασκευασάντων αὐτὰς ἑαυτοῖς τάφους, συνέβη μνηστεύειν αὐτῶν ταῖς πυραμίσι ἐνταφίσιναι, &c.*

<sup>r</sup> *Plin. lib. 36. cap. 7.*

<sup>s</sup> Which may also be confirmed by *Bellonius's* observations; who, describing the rock, out of which, upon *Moses* striking it, there gushed out waters, makes it to be such a speckled kind of *Thebaick* marble: *Est une grosse pierre massive, droite de mesme grain, & de la couleur, qu'est la pierre Thebaïque.*

<sup>t</sup> The compass of the *Scapus* of this column at *Alexandria*, near the *Torus*, is XXIV *English* feet: the compass of the *Scapus* of those at *Rome*, is XV *English* feet, and three inches. By these proportions, and by those rules which are expressed in *Vitruvius*, and in other books of architecture, the ingenious reader may compute the true dimensions of those before the *Pantheon*, and of this at *Alexandria*; being, in my calculation, the most magnificent column that ever was made, of one intire stone.

<sup>u</sup> *Pervenitur in elegans cubiculum quadrangulum sex passus longum, & quatuor latum, quatuor verò vel VI orgyis altum, in quo marmor nigrum solidum, in cistæ formam excisum, invenimus, XII pedes longum, V altum, & totidem latum, sine operculo.* *Bellon. Obser. lib. 2. cap. 42.*

<sup>x</sup> *Les Voyages de Monsieur de Breves.*



four hundred and eight parts of the *English* foot divided into a thousand parts (that  $y$  is six feet, and four hundred and eighty-eight of the thousand parts of a foot) in breadth, at the north-end, two feet, and two hundred and eighteen parts of the foot divided into a thousand parts (that  $z$  is, two feet, and two hundred and eighteen of a thousand parts of a foot). The depth is two feet, and eight hundred and sixty of the thousand parts of the *English* foot. A narrow space, yet large enough to contain a most potent and dreadful monarch, being dead, to whom, living, all *Egypt* was too streight and narrow a circuit. By these dimensions, and by such other observations as have been taken by me from several embalmed bodies in *Egypt*, we may conclude, that there is no decay in nature (*though the question is as old as* <sup>a</sup> *Homer*); but that the men of this age are of the same stature they were near three thousand years ago; notwithstanding St. <sup>b</sup> *Augustin*, and others, are of a different opinion. *Quis jam ævo isto non minor suis parentibus nascitur?* is the complaint of *Solinus*, above fifteen hundred years since. And yet in those *cryptæ sepulcrales*, at *Rome*, of the primitive Christians, resembling cities underground, admired anciently by St. *Hierom*, and very faithfully of late described by *Bosius*, in his *Roma subterranea*, (for I took so much pains for my own satisfaction, as to enter those wonderful grots, and compare his descriptions) I find the bodies intombed, some of them being as ancient as *Solinus* himself, no way to exceed the proportions of our times.

It may be justly questioned how this monument of *Cheops* could be brought hither, seeing it is an impossibility, that, by those narrow passages, before described, it should have entered. Wherefore we must imagine,

that by some *machina* it was raised and conveyed up without, before this oratory or chamber was finished, and the roof closed. The position of it is thus: It stands exactly in the meridian north and south, and is, as it were, equidistant from all sides of the chamber, except the east, from whence it is doubly remoter than from the west. Under it I found a little hollow space to have been dug away, and a large stone in the pavement removed, at the angle next adjoining to it; which <sup>c</sup> *Sandys* erroneously imagines to be a passage into some other compartment; dug away, no doubt, by the avarice of some, who might not improbably conjecture an hidden treasure to be repositied there. An expenceful prodigality, out of superstition used by the ancients, and with the same blind devotion taken up, and continued to this day, in the East-Indies. And yet, it seems, by *Josephus's* relation, that by the wisest king, in a time as clear and unclouded as any, it was put in practice; who thus describes the funeral of king *David*: <sup>d</sup> *His son Solomon buried him magnificently in Hierusalem, who, besides the usual solemnities at the funerals of kings, brought into his monument very great riches; the multitude of which we may easily collect, by that which shall be spoken. For, thirteen hundred years after, Hyrcanus, the high-priest, being besieged by Antiochus, surnamed Pius, the son of Demetrius, and being willing to give money to raise the siege, and to lead away his army, not knowing where to procure it, he opened one of the vaults of the sepulchre of David, and took thence three thousand talents; part whereof being given to Antiochus, he freed himself from the danger of the siege, as we have elsewhere declared. And again, after many years, king Herod opened another vault, took out a great quantity of money; yet neither of them*

GREAVES.

$$\begin{array}{r} y \text{ 6 feet} \\ 488 \\ \hline 1000 \end{array}$$

<sup>z</sup>  $z$  feet  $\frac{218}{1000}$  In the reiteration of these numbers, if any shall be offended, either with the novelty or nephew to *Tamurlane* the great (for so is his name, and not *Tamerlane*) and emperor of the *Moguls*, or *Tatars* (whom we term amidst the *Tartars*). For I find in his astronomical tables (the most accurate of any in the east) made about CC years since, the same course observed by him, when he writes of the *Grecian*, *Arabian*, *Persian*, and *Gelalean epocha's*; as also of those of *Catæa* and *Turkistan*. He expresseth the numbers at large, as I have done; then in figures, such as we call *Arabian*, because we first learned these from them; but the *Arabians* themselves fetch them higher, acknowledging that they received this useful invention from the *Indians*; and therefore, from their authors, they name them *Indian figures*: lastly, he renders them again in particular tables; which manner I judge worthy the imitation, in all such numbers as are *radical*, and of more than ordinary use. For if they be only twice expressed, if any difference shall happen by the neglect of scribes, or printers, it may often so fall out, that we shall not know which to make choice of; whereas if they be thrice expressed, it will be a rare chance but that two of them will agree; which two we may generally presume to be the truth.

<sup>a</sup> *Jam verò ante annos propè mille, vates ille Homerus non cessavit minora corpora mortalium quàm prisca conqueri.* Plin.

*Nam genus hoc viro jam decrecebat Homero.*

*Terra malos homines nunc educat atque pusillos.*

<sup>c</sup> *Sandys's travels.*

<sup>d</sup> Jos. lib. 7. ant. Judaic. cap. 12. Ἐθαύμαζε δ' αὐτὸν ὁ παῖς Σολομὼν ἐν Ἱερουσαλὺμοις διαπρεπῶς, τοῖς τ' ἄλλοις οἷς περὶ κηδεῖαν νομίζεσθαι βασιλικὴν ἀπάσι, καὶ αὐτῷ πλεον πολὺν καὶ ἀρθρον συνεκίδευσεν, &c.

<sup>b</sup> August. de Civ. Dei, l. 15. cap. 9.

came



GREAVES. *came to the coffins of the kings; for they were with much art hid under-ground, that they might not be found by such as entered into the sepulchre.*

The ingenious reader will excuse my curiosity, if, before I conclude my description of this Pyramid, I pretermitt not any thing within, of how light a consequence soever. This made me take notice of two inlets, or spaces, in the south and north sides of this chamber, just opposite to one another: that on the north was in breadth seven hundred of a thousand parts the *English* foot, in depth four hundred of a thousand parts; evenly cut, and running in a strait line six feet, and farther, into the thickness of the wall. That on the south is larger, and somewhat round, not so long as the former: by the blackness within, it seems to have been a receptacle for the burning of lamps. *T. Livius Burreretus* would gladly have believed, that it had been an hearth for one of those eternal lamps; such as have been found in *Tulliola's* tomb in *Italy*; and, if *e Camden* be not misinformed, in *England*, in the *cryptoporticus* of *Fl. Valerius Constantius*, father to *Constantine* the great, dedicated to the urns and ashes of the dead; but I imagine the invention not to be so ancient as this Pyramid: however, certainly a noble invention; and, therefore, pity it is, it should have been smothered by the negligence of writers, as with a damp. How much better might *Pliny*, if he knew the composition of it, have described it,

than he hath done the *linum asbestinum*, a sort of linen spun out of the veins, as some suppose, of the *Caristian*, or *Cyprian* stone? (which, in my travels, I have often seen) tho' *Salmasius* <sup>f</sup>, with more probability, contends the true *asbestinum* to be the *linum vivum*, or *linum Indicum*; in the folds and wreaths of which they inclosed the dead body of the prince, (for, saith *e Pliny*, *Regum Indæ funebres tunicae*: and no wonder, seeing not long after he adds, *Æquat pretia excellentium margaritarum*) committing it to the fire and flames till it were consumed to ashes: while, in the same flames, this shroud of linen, as if it had only been bathed and washed (to allude to his expression) by the fire, became more white and refined. Surely a rare and commendable piece of skill, which *h Pancirollus* justly reckons among the *deperdita*; but infinitely inferior, either in respect of art or use, unto the former. And thus I have finished my description of all the inner parts of this Pyramid: in which I could neither borrow light to conduct me from the ancients, nor receive any manuduction from the uncertain informations of modern travellers, in those dark and hidden paths. We are now come abroad into the light and sun; where I found my janizary, and an *English* captain, a little impatient to have waited above <sup>i</sup> three hours without, in expectation of my return; who imagined what they understood not, to be an *impertinent* and *vain curiosity*.

## A Description

<sup>e</sup> Camden Brit. ubi agit de Brigantibus.

<sup>f</sup> Salmasii Exercitat. Plinian.

<sup>g</sup> Plin. lib. 18. cap. 1.

<sup>h</sup> Pancirol. Titl. 4. rerum deperditarum.

<sup>i</sup> That I and my company should have continued so many hours in the Pyramid, and live, (whereas we found no inconvenience) was much wondered at by Dr. *Harvey*, his majesty's learned physician: for, said he, seeing we never breathe the same air twice, but still new air is requisite to a new respiration, (the *succus alibilis* of it being spent in every expiration) it could not be, but by long breathing we should have spent the aliment of that small stock of air within, and have been stifled; unless there were some secret tunnels conveying it to the top of the Pyramid, whereby it might pass out, and make way for fresh air to come in, at the entrance below. To which I returned him this answer, That it might be doubted, whether the same numerical air could not be breathed more than once; and whether the *succus*, and aliment of it, could be spent in one single respiration; seeing those *urinatores*, or divers under water, for sponges, in the *Mediterranean* sea, and those for pearls in the *sinus Arabicus*, and *Perficus*, continuing above half an hour under water, must needs often breathe in and out the same air. He gave me an ingenious answer, That they did it by help of sponges filled with oil, which still corrected and fed this air; the which oil being once evaporated, they were able to continue no longer, but must ascend up, or die. An experiment most certain and true. Wherefore I gave him this second answer: That the fuliginous air we breathed out in the Pyramid, might pass thorough those galleries we came up, and so thorough the freight neck, or entrance, leading into the Pyramid; and, by the same, fresh air might enter in, and come up to us: which I illustrated with this similitude; As at the freights of *Gibraltar*, the sea is reported by some, to enter in on *Europe* side, and to pass out on *Africa* side; so in this freight passage, being not much above three feet broad, on the one side air might pass out, and at the other side fresh air might enter in. And this might no more mix with the former air, than the *Rhodanus*, as *Pomponius Mela*, and some others, report, passing through the *lacus Lemanus*, or lake of *Geneva*, doth mix and incorporate with the water of the lake: for as for any *tubuli*, to let out the fuliginous air at the top of the Pyramid, none could be discovered within, or without. He replied, They might be so small, as that they could not easily be discerned; and yet might be sufficient to make way for the air, being a thin and subtle body. To which I answered, That the less they were, the sooner they would be obstructed with those tempests of sands, to which these deserts are frequently exposed; and therefore the narrow entrance into the Pyramid is often so choaked up with drifts of sand, that there is no entrance into it: wherefore we hire *Moors* to remove them, and open the passage, before we can enter into the Pyramid; with which he rested satisfied. But I could not so easily be satisfied with that received opinion, That, at the freights of *Gibraltar*, the sea enters in at the one side, and at the same time passes out at the other. For, besides that in twice passing those freights I could observe no such thing, but only an inlet, without any outlet of the sea; I inquired of a captain of a ship, being captain of one of the six that I was then in company with, and an understanding man, who had often passed that way with the pirates of *Algier*.



gier, Whether ever he observed any outlet of the sea on *Africa* side? He answered, No. Being asked, Why GREAVES. then the pirates went out into the *Atlantick* sea on *Africa* side, if it were not, as the opinion is, to make use of the current? he answered, It was rather to secure themselves from being surpris'd by the Christians, who had, near the mouth of the streights, the port of *Gibraltar*, on the other side, to harbour in. Wherefore, when I consider with myself the great draught of waters that enter at this streight, and the swift current of waters which pass out of the *Pontus Euxinus*, by the *Bosporus Thracius*, into the *Mediterranean* sea, (both which I have seen) besides the many rivers that fall into it, and have no visible passage out; I cannot conceive, but that the *Mediterranean* sea, or *Urinal*, (as the *Arabians* call it, from its figure) must long since have been filled up, and, swelling higher, have drowned the plains of *Egypt*; which it hath never done. Wherefore I imagine it to be no absurdity in philosophy, to say that the earth is tubulous, and that there is a large passage under-ground, from one sea to another. Which being granted, we may easily thence apprehend the reason why the *Mediterranean* sea rises no higher, notwithstanding the fall into it of so many waters; and also know the reason why the *Caspian* sea, tho' it hath not, in appearance, any commerce with other seas, continues salt, (for so it is, what-soever *Polycletus*, in *Strabo*, says to the contrary) and swells not over its banks, notwithstanding the fall of the great river *Volga*, and of others, into it. That which gave me occasion of entering into the speculation, was this: In the longitude of eleven degrees, and latitude of forty-one degrees, having borrowed the tackling of six ships, and in a calm day sound'd with a plumbet of almost twenty pounds weight, carefully steering the boat, and keeping the plumbet in a just perpendicular, at a thousand forty-five *English* fathoms; that is, at above an *English* mile and a quarter in depth; I could find no land, or bottom.

## A Description of the Second PYRAMID.

FROM the first Pyramid we went to the second, being scarce distant the night of an arrow. By the way I observed, on the west side of the first, the ruins of a pile of building, all of square and polished stone; such as <sup>a</sup> *Pliny* calls *basaltes*, and describes to be *ferrei coloris, & duritiæ*; of an iron colour and hardness: formerly, it may be, some habitation of the priests, or some monument of the dead. To the right hand of this, tending to the south, stands this second Pyramid; of which, besides the miracle, the ancient and modern writers have delivered little. <sup>b</sup> *Herodotus* relates, that *Cephren*, in imitation of his brother *Cheops*, built this; but that he fell short in respect of the magnitude: For (saith he) we have measured them. It were to be wished, for fuller satisfaction of the reader, he had expressed the quantity, and also the manner how he took his measure. He adds, *It hath no subterraneous structures, neither is the Nilus by a chanel derived into it, as in the former.* <sup>c</sup> *Diodorus* somewhat more particularly describes it thus: That for the architecture it is like unto the former, but much inferior to it in respect of magnitude; each side of the basis contains a stadium in length. The same measure, by <sup>d</sup> *Strabo*, is assigned to the altitude: Each of these [discourfing of the first and second Pyramids] is a furlong in height. That is, to comment on their words, of *Grecian* feet six hundred, of *Roman* six hundred twenty-five: so that, by the computation of *Diodorus*, each side should want an hundred *Grecian* feet of the former Pyramid. <sup>e</sup> *Pliny* makes the difference to be greater; for, assigning eight hundred eighty-three feet to the former, he allows to the side of the basis of this,

but seven hundred thirty-seven. By my observation, the stones are of colour white, nothing so great and vast as those of the first and fairest Pyramid; the sides rise not with degrees like that, but are all of them plain and smooth; the whole fabrick (except where it is opposed to the south) seeming very entire, free from any deformed ruptures or breaches. The height of it, taken by as deliberate a conjecture as I could make, (which it was easy to do by reason of the nearness of this, and the former, being both upon the same plain) is not inferior to it; and therefore *Strabo* hath rightly judged them to be equal. The sides also of the basis of both are alike; as, besides the authority of <sup>f</sup> *Strabo*, the *Venetian* doctor assured me, who measured it with a line. There is no entry leading into it, and therefore what may be within, whether such spaces and compartments, as I observed in the former, or whether different, or none, I must leave to the conjecture of travellers, and to the discovery of after-times.

This Pyramid is bounded on the north and west sides, with two very stately and elaborate pieces; which I do not so much admire, as that by all writers they have been pretermitted, about thirty feet in depth, and more than a thousand and four hundred in length: out of the hard rock these buildings have been cut in a perpendicular, and squared by the chissel, as I suppose, for lodgings of the priests. They run along, at a convenient distance, parallel to the two sides we mentioned of this Pyramid, meeting in a right angle, and making a very fair and graceful prospect. The entrance into them is by square openings, hewn out of the rock, much of the same

<sup>a</sup> Plin. l. 35. cap. 7.<sup>b</sup> Herodot. l. 2.<sup>c</sup> Diodor. Sic. lib. 1.

Τῇ μὲν, κατὰ τὴν τέχνην χειρουργίᾳ παραπλοσίαν τῇ προειρημένῃ, τῷ δὲ μεγέθει πολὺ λεπτομένην, ὡς ἂν τῆς ἐν τῇ βάσει πλάτους ἐκάστης ἑκαστῆς ὀφείλει.

<sup>d</sup> Εἰσι γὰρ ὀφθαλμοὶ τὸ ὕψος. Strabo, lib. 17.<sup>e</sup> Plin. l. 36. cap. 12. *Alserius inter-*

valla singula per quatuor angulos pares 10 cc xxxvii [pedes] comprehendunt.

<sup>f</sup> Strabo, l. 7.



**GREAVES.** bigness with those I described in the first Pyramid. Whether these were symbolical, (as the theology of the *Egyptians* consisted much in mysterious figures) and the depresse and lowness of these were to teach the priests humility; and the squareness and evenness of them, an uniform and regular deportment in their actions; I leave to such as have written of their hieroglyphicks to determine. The hollow space within, of them all, is somewhat like to a square and well-proportioned chamber, covered and arched above with the natural rock: in most of which (as I remember) there was a passage opening into some other compartment, which the rubbish and darkness hindered me from viewing. On the north side, without, I observed a line, and only one, ingraven with sacred and *Egyptian* characters, such as are mentioned by *Herodotus*, and *Diodorus*, to have been used by the priests, and were different from the vulgar characters in civil affairs: in which former kind *Justin Martyr* makes *Moses* to have been skilful; as the Scripture shews him to have been <sup>k</sup> learned in all the wisdom of the *Egyptians*. These ran not downwards, as the *Chinese* in our times

write, but were continued in a strait line, as we used to write: and are to be read (if any understand those mysterious sculptures) by proceeding from the right hand to the left, and, as it were, imitating the motion and course of the planets. For so *Herodotus* expressly informs us, That the *Grecians* write and cast account, going from the left hand to the right; the *Egyptians* from the right hand to the left. And this is that which, in an obscure expression, is also intimated by *Pomponius Mela*: [*Ægyptii*] suis literis perversè utuntur. A manner practised by the *Hebrews*, *Chaldeans*, and *Syrians*, to this day: and not unlikely to have been borrowed by them from the *Egyptians*; to whom the *Chaldeans* also owed their first skill in astrology, as the *Grecians* did their knowledge in geometry; the former being attested by *Diodorus*, and the latter confessed by *Proclus*, and other *Grecians*. And surely in imitation of these, or of the *Jews*, the *Arabians*, neighbouring upon both, have taken up this manner of writing, and continued it to our times; communicating it also, by their conquests, to the *Persians* and *Turks*.

<sup>g</sup> Herodot. lib. 2.

<sup>h</sup> Παιδεύσει δὲ τὰς υἱὰς οἱ μὲν ἱερεῖς γράμματα διττὰ. Τὰ τε ἱερὰ καλούμενα, καὶ κοινοτέρων ἔχοντα τὴν μάθησιν. Diod. l. 1.

<sup>i</sup> Ὁ δὲ προφήτης εἰ καὶ τὴν ἐδυσκλίαν ἔχεν, ἀλλ' ἐκ' ἐτὶ καὶ τὴν χρῆσιν, &c. Just. Martyr. Quest. & Resp. ad Orthodoxos.

<sup>k</sup> Acts vii. 22.

<sup>l</sup> Γράμματα γράφει καὶ λογίζονται ἡέροι, Ἕλληνες μὲν ἀπὸ τῶν ἀριστέρων ἐπὶ τὰ δεξιὰ φέροντες τὴν χεῖρα, Αἰγύπτιοι δὲ ἀπὸ τῶν δεξιῶν ἐπὶ τὰ ἀριστερά. Herodot. lib. 2.

<sup>m</sup> Pompon. Mel. l. 1. c. 9.

<sup>n</sup> Diodor. Sic. l. 1.

<sup>o</sup> 2 Lib. commen. Procli, in 1 lib. Eucl.

### A Description of the Third PYRAMID.

**T**HE third Pyramid stands distant from the second about a furlong, upon an advantageous height, and rising of the rock, whereby afar off it seems equal to the former; tho' the whole pile is much less, and lower. The time was so much spent with my other observations, that I could not take so exact a view as I desired, and the work deserved; yet I took so much of both, as to be able to confute the errors of others. But before I perform this, I shall relate what the ancients, and some one or two of our best writers, which have travelled thither, have delivered concerning this. *Herodotus*, discoursing of it, tells us, that (*Mycerinus*) left a Pyramid much less than that of his father, wanting of all sides (for it is quadrangular) twenty feet: it is three hundred feet on every side, being to the middle of it built with Ethiopick marble. *Diodorus Siculus* is somewhat larger and clearer: Every side of the basis (*Mycerinus*)

caused to be made three hundred feet in length; he raised the walls fifteen stories, with black stone, like Thebaick marble; the rest of it he finished with such materials as the other Pyramids are built. This work, altho' it is exceeded by the rest in magnitude, yet for the structure, art, and magnificence of the marble, it very far excels them. In the side towards the north, *Mycerinus*, the name of the founder, is ingraven. To *Diodorus* I shall adjoin the testimony of *Strabo*: Farther, upon a higher rise of the hill, is the third (Pyramid) much less than the two former, but built with a greater expence: for almost from the foundation of it to the middle, it consists of black stone, with which they make mortars, brought from the remotest mountains of Ethiopia, which, being hard, and not easy to be wrought, hath made the work the more costly. *Pliny* also, not as a spectator, and eye-witness, as the former, but as an historian, writes thus: The third (Pyramid)

<sup>a</sup> Herodot. lib. 2. Πυραμίδα δὲ καὶ ἑτος ἀπελίπετο πολλὸν ἐλάσσων τῇ πατρὶς, εἰκόσι ποδῶν καὶ ἀδύσαν, καὶ ὧλον ἐκασὸν τεῖων πλεθρῶν, ἐκείνης τετραγώνῃ, λίθῃ δὲ ἐς τὸ ἥμισυ Αἰθιοπικῇ.

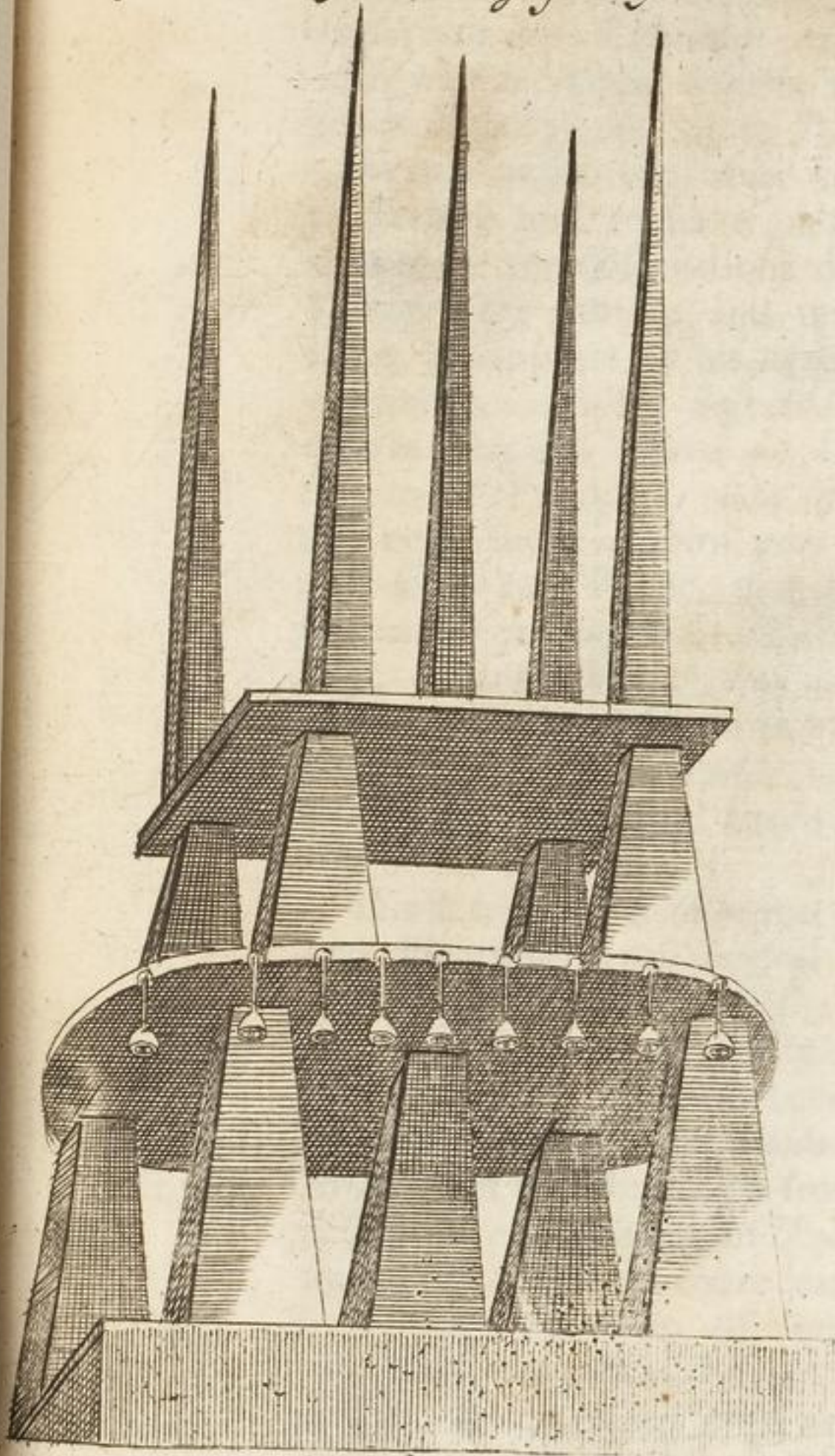
<sup>b</sup> Strabo, l. 17. Geog.

<sup>c</sup> Plin. l. 36. c. 12.

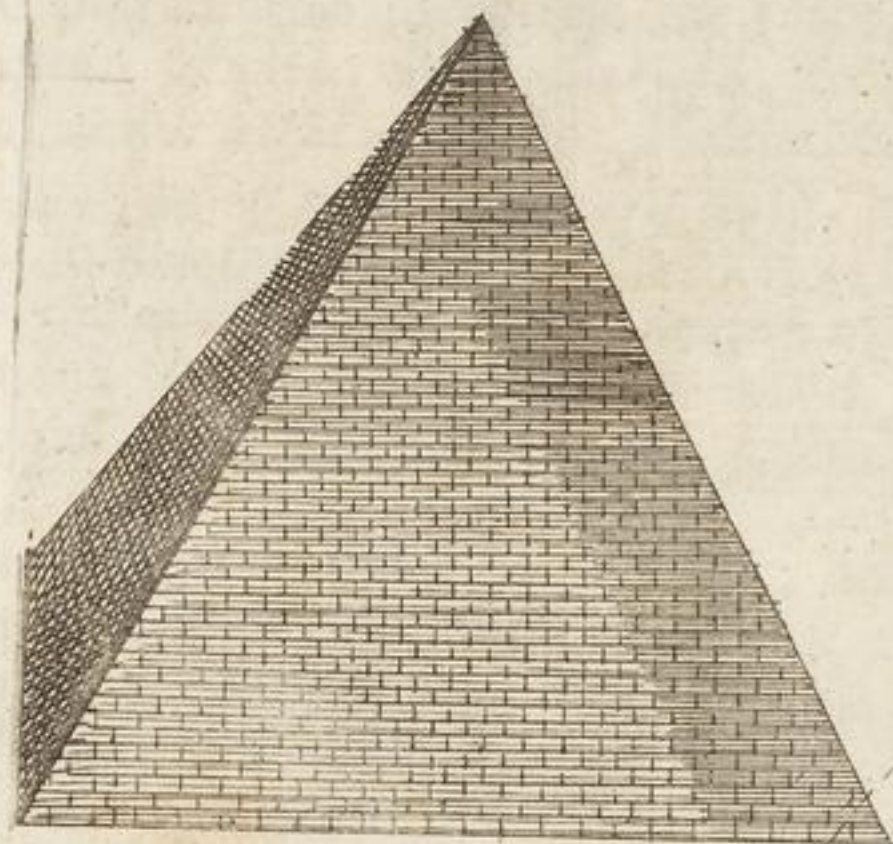
<sup>d</sup> Tertia minor praeclara, sed multo spectatior, Aethiopicis lapidibus assurgit CCCLXIII pedibus inter angulos.



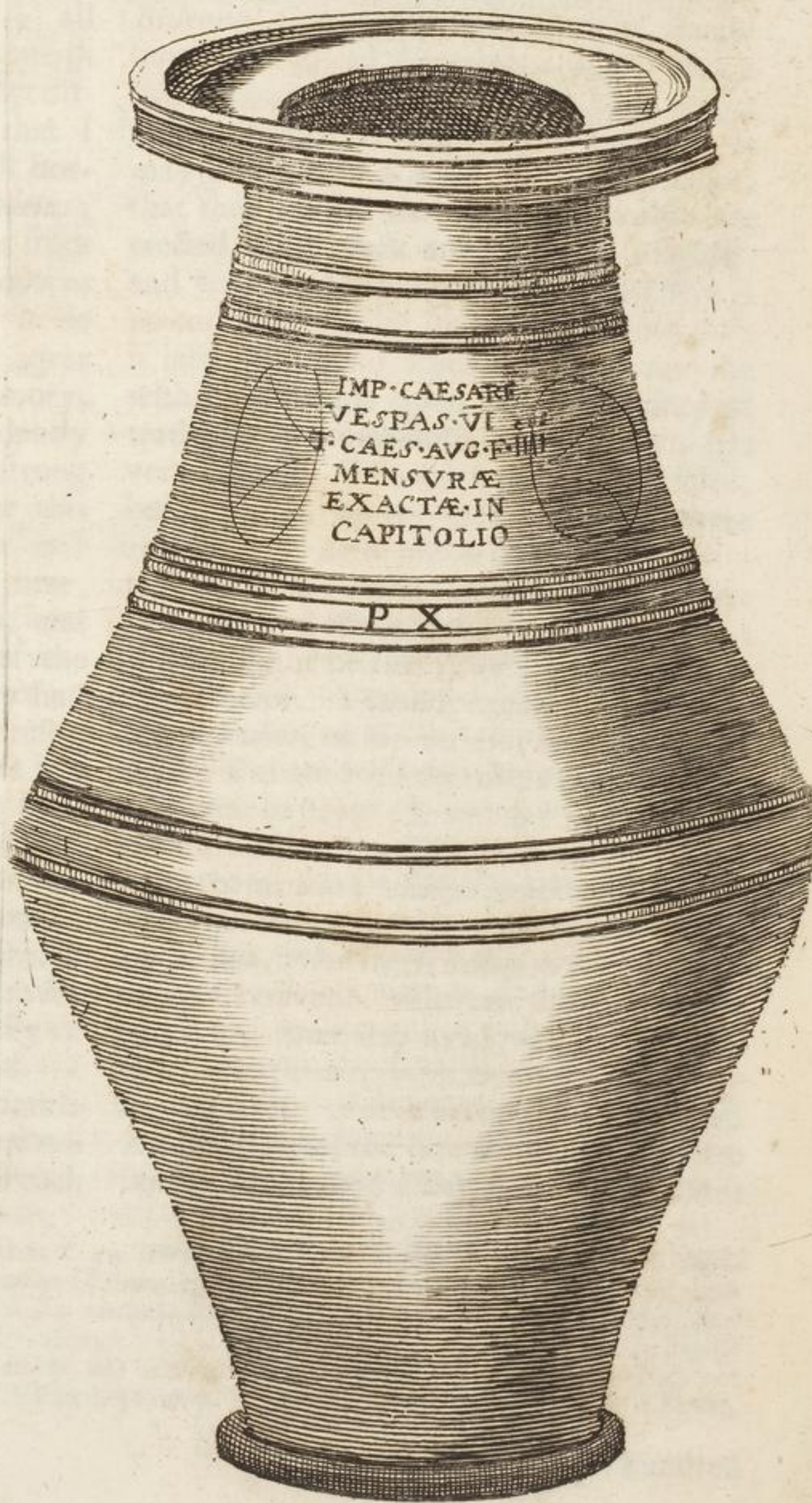
P. 632.  
*Porrenas Tomb at Clusium*  
*in Italy Consisting of many Pyramids*



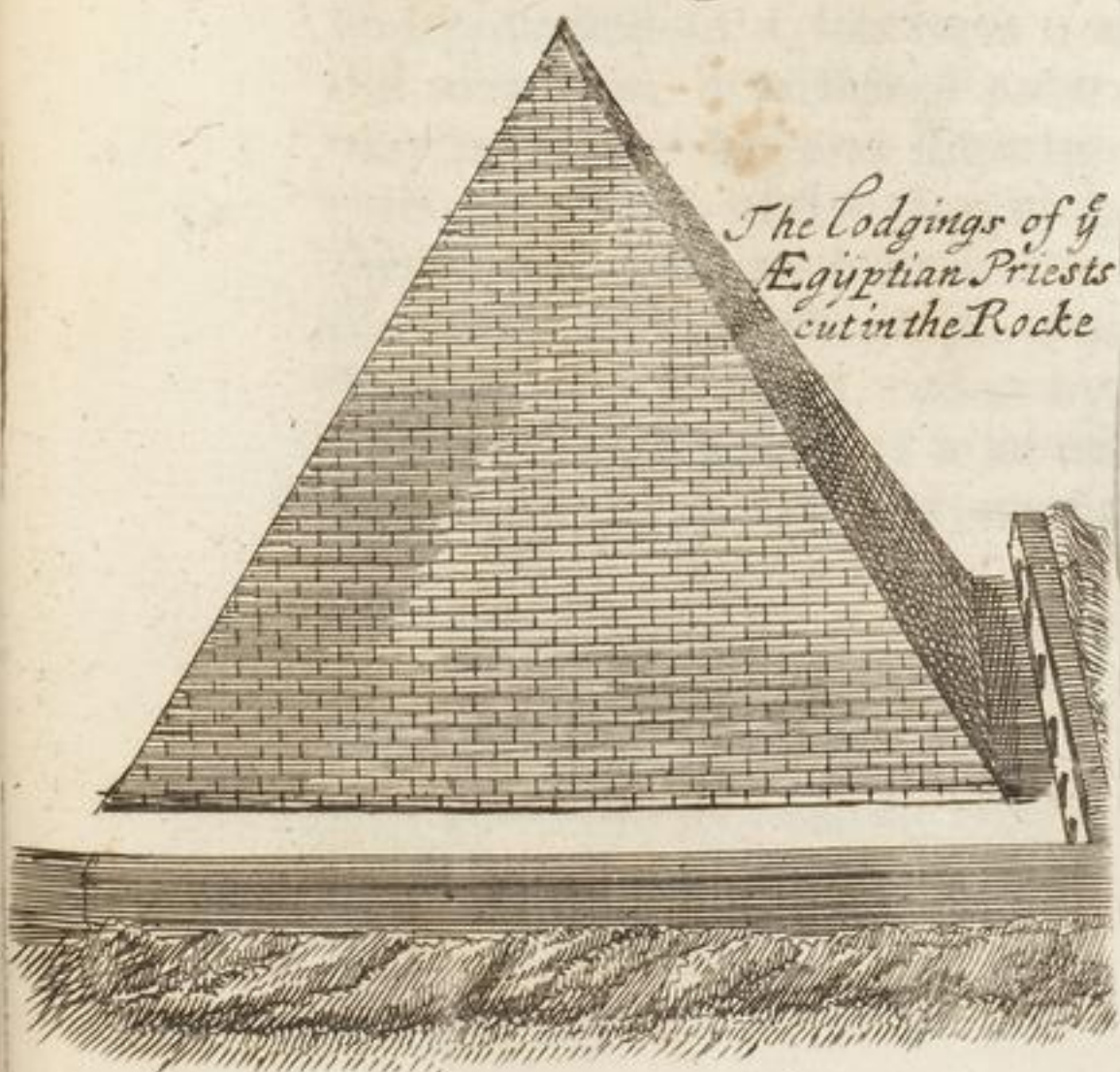
P. 646.  
*The third Pyramid*



P. 682.  
*ON CONGII VESPASIANI IN PALATIO*  
*FARNESIANO ROMÆ*



P. 645  
*The second Pyramid.*



*The Lodgings of the*  
*Egyptian Priests*  
*cut in the Rocks*



is less than the former we mentioned, but much more beautiful: it is erected with Ethiopick marble, and is three hundred sixty-three feet between the angles. And this is all that hath been preserved of the ancients concerning this Pyramid. Amongst modern writers, none deserve to be placed before Bellonius, or rather P. Gillius: for <sup>e</sup> Thuanus makes the other to have been a plagiarist, and to have published in his own name the observations of P. Gillius; a man very curious and inquisitive after truth, as appears by his *topography of Constantinople*, and his *Bosporus Thracicus*, to whom Bellonius served as an amanuensis. The third <sup>f</sup> Pyramid is much less than the former two; but is a third part greater than that which is at Rome, near the Mons Testaceus, as you pass to St. Paul's in the Ostian way. It is still perfect, and no more corrupted than as if it had been newly built: for it is made of a kind of marble, called basaltus, or Ethiopick marble, harder than iron itself.

It will be in vain to repeat the traditions and descriptions of several others; all which, by a kind of confederacy, agree in the same tale for the substance, only differing in some circumstances. So that I shrewdly suspect, that Diodorus hath borrowed most of his relation from Herodotus; and Strabo and Pliny from Diodorus, or from them both; and the more learned moderns from them all: for else how can it be imagined, they should so constantly agree in that, which, if my eyes, and <sup>g</sup> memory, extremely fail me not, is most evidently false? And therefore I have a strong jealousy, that they never came near this third Pyramid; but that they did, as I have observed all travellers, in my time, in Egypt to do, fill themselves so full, and as it were so surfeit, with the sight of the greater and fairer Pyramid, that they had no appetite to be spectators of the rest; where they should only see the same miracle, (for the Pyramids are all of the same figure) the farther they went, decreasing, and presented in a less form: or, if they did view this, it was *quasi per transfennam*; very perfunctorily, and slightly; and that through a false and coloured glass: for they have mistaken both in the quality of the stone, and colour of the Pyramid. I begin with <sup>h</sup> Herodotus, who, by a notable piece of forgetfulness, if it be not a *supra* in the copies, makes the dimensions of each

of the sides, in the *basis* of this, to be three hundred feet, and yet to want but twenty of the first Pyramid, to which he assigned before eight hundred feet, an impossibility in arithmetick: and therefore it will be no presumption to correct the place, and instead of *εἰκοσι ποδῶν καὶ ἑκαδὲς*, to write *πενήκοντα ποδῶν καὶ ἑκαδὲς*. I know not how to palliate or excuse his other error, where he makes this Pyramid to be built as far as to the middle of it, with Ethiopick marble. If this sort of marble be *ferrei coloris*, as it is described by <sup>i</sup> Pliny, and granted by <sup>k</sup> Diodorus and <sup>l</sup> Strabo, both of these expressing the colour to be black, and the latter bringing it from the remotest mountains of Ethiopia, where the marble hath the same tincture and colour with the inhabitants; then can this relation of Herodotus no way be admitted: for the whole Pyramid seems to be of clear and white stone, somewhat choicer and brighter, than that in either of the two other Pyramids. And therefore I wonder, that Diodorus, Strabo, and Pliny, and, amongst later authors, Bellonius, Gillius, and several others, should have all followed Herodotus; when, with a little pains and circumspection, they might have reformed his and their own error. It may perhaps be alleged in their defence, that they mean, the buildings within are erected with black and Ethiopick marble: and yet, if this be granted, since there is no entrance leading into this, no more than is into the second Pyramid, what may be within, depends upon the incertainty of tradition or conjecture, both which are very fallible. Though it cannot be denied, but close by, on the east side of it, there are the ruins of a pile of building, with a sad and dusky colour, much like that we described in passing to the second Pyramid; which might be the ground and occasion of this error. I cannot excuse the ancients; but Bellonius, or Gillius (for it is no matter which of them owns the relation, when both of them have erred) are far more inexcusable; because it might have been expected from them, what <sup>m</sup> Livy supposes, *Novi semper scriptores, aut in rebus certius aliquid allaturos se, aut scribendi arte rudem vetustatem superaturos credunt*. Whereas these, on the contrary, have depraved what hath been, in this particular, with truth delivered by the ancients. For whereas Herodotus, and Diodorus, equal the side of the *basis* to three hundred feet, and Pliny extends it to three

GREAVES.

<sup>e</sup> Thuan. hist. l. 16. <sup>f</sup> Bellon. observ. l. 2. c. 44. Tertia Pyramis duabus superioribus longè minor, tertia est autem parte major eâ quæ apud Testaceum montem est Romæ, quæ ad D. Pauli eundem est, itinere Ostiensi. Adhuc integræ est, nec magis rimis corrupta, quàm si jam recens exstructa esset. Marmoris enim genere constat, quod Basaltus nuncupatur, vel lapis Æthiopicus, ipso ferro durior.

<sup>g</sup> I have since conferred with an English captain, who, having been four times at Alexandria, and as often at the Pyramids, assures me that I am not mistaken.

<sup>h</sup> Herodot. lib. 2. <sup>i</sup> Plin. l. 36. c. 7. <sup>k</sup> Diodor. l. 1. <sup>l</sup> Strabo,

<sup>m</sup> T. Liv. lib. 1.

hundred



**GREAVES.** hundred sixty-three, they only make it a third part greater than the Pyramid at Rome, of C. Cæsius, near the *mons Testaceus*: so that either they have much enlarged that at Rome, or shrunk and contracted this. For the Pyramid at Rome, exactly measured on that side which stands within the city, is completely seventy-eight feet *English* in breadth; to which if we add a third part of it, the result will be an hundred and four; which should be equal to this *Egyptian* Pyramid, in the notion and acceptation of *Bellonius*. An unpardonable oversight, no less than two hundred feet, in a very little more than three hundred. For so much, besides the authority of *Herodotus*, and *Diodorus*, before cited, I take the side of this Pyramid to be, and the altitude to have much the same proportion.

I would gladly have seen in this, the name of *Mycerinus*, the founder of it, ingraven, as <sup>a</sup> *Diodorus* mentions; or that other inscription in the first, whereof *Herodotus* procured the interpretation: but both have been defaced by time. His words are these: ° *In the Pyramid there are Egyptian characters inscribed, which shew how much was expended upon the workmen, in*

*radishes, onions, and garlick; which an interpreter (as I well remember) said, was the sum of a thousand and six hundred talents of silver: which if it be so, how much is it credible was spent in iron, and in meat, and in clothes for the labourers?* Hereby I might have known what to determine of the ancient *Egyptian* letters: I mean not the sacred ones, (for those were all symbolical, expressing the abstractest notions of the mind, by visible similitudes of birds and beasts, or by representations of some other familiar objects) but those used in civil affairs. By such sculptures, which I have seen in gems found at *Alexandria*, and amongst the *Mummies*, I can no way subscribe to the assertion of *Kircherus*, though an able man, who, in his *Prodromus Coptus*, contends, that the present *Egyptian* or *Coptite* character (which certainly is only a corruption and distortion of the *Greek*) is the same with that of the ancient *Egyptians*. But surely the *Egyptian* character is of a much higher descent: and, if we believe <sup>q</sup> *Tacitus*, (whose opinion is very probable) they were the first inventors of letters; tho' some ascribe the honour of this invention to the *Phœnicians*.

<sup>a</sup> Diodor. l. 1.      ° Herodot. l. 2. Σεσημασται δὲ διὰ γραμμάτων Αἰγυπτίων ἐν τῇ πυραμίδι, ὅσα ἔς τε συρμαίνων, καὶ κρόμυα, καὶ σκόροδα ἀναισιμῶς τοῖσι ἐργαζομένοισι, καὶ ὡς ἐμὲ εἰς μεμνήδης τὰ ὀβριμνέως μοι ἐπιλεγόμενοι τὰ γράμματα ἔσθιν, ἑξακόσια καὶ χίλια τάλαντα ἀργυρίου τετελεσθῆς, &c.  
<sup>p</sup> *Phœnices primi, famæ si creditur, ausi, Mansuram rudibus vocem signare figuris. Nondum flumineas Memphis contexere biblos*  
<sup>q</sup> *Primi per figuras animalium Ægyptii sensus mentis effingebant: et antiquissima monumenta memoriæ humanæ impressa saxi cernuntur: et literarum semet inventores perhibent. Inde Phœnices, quia mari præpollebant, intulisse Græciæ, gloriamque adeptos, tanquam reppererunt, quæ acceperant.* Tacit. 2. lib. annal. Lucan. lib. 3.

### Of the rest of the PYRAMIDS in the Libyan Desert.

**I** Have done with these three Pyramids, each of them being very remarkable, and the two first reckoned amongst the miracles of the world. The rest in the *Libyan* desert, lying scattered here-and-there, are (excepting one of them) but lesser copies, and, as it were, models of these: and therefore I shall neither much trouble myself, nor the reader, with the description of them: tho', to speak the truth, did not the three first, standing so near together, obscure the lustre of the rest, which lie far scattered, some of them were very considerable. And therefore I cannot but tax the omission of the ancients, and the inadvertency of all modern writers and travellers, who, with too much supineness, have neglected the description of one of them; which, in my judgment, is as worthy of memory, and as near a miracle, as any of

those three which I have mentioned. And this stands from these south and by west, at twenty miles distance, more within the sandy desert, upon a rocky level like these, and not far from the village whence we enter the *Mummies*. This, as the *Venetian* doctor assured me, and as I could judge by conjecture at a distance, hath the same dimensions that the first and fairest of these; hath graduations or ascents without, and of the same colour like that, (but more decay'd, especially at the top) and an entrance into it on the north side, which is barred up within; and therefore whatsoever is spoken of the first, in respect of the exterior figure, is applicable to this section. <sup>a</sup> *Bellonius* extremely exceeds in his computation of the number of them, who thus writes: *Above an hundred others are seen dispersed up and down in that plain.* I could

<sup>a</sup> *Plusquam centum per eam planiciem hinc inde sparsa conspiciuntur.* Bellon. l. 2. c. 44.

not



not discover twenty. And, long since, *Ibn Almatoug*, in his book of the miracles of Egypt, reckons them to be but XVIII. There are in the west side no more famous

buildings than the Pyramids: the number of them is XVIII. Of these, there are three in that part which is opposite to Fostat (or <sup>b</sup> Cairo).

<sup>b</sup> That Fostat, Metza, and Cahira (or, as we usually term it, Cairo), are three distinct names, as it were, of one and the same city, appears by the *Geographia Nubiensis*, and *Abulfeda*, in *Arabick*: tho' *Abulfeda* more particularly describes *Alkahira* to be on the north side of Fostat, and Fostat to be seated upon the river Nilus.

## In what manner the PYRAMIDS were built.

WE had ended our discourse of the Pyramids, but that I find one scruple touched upon by *Herodotus*, *Diodorus*, and *Pliny*, which is worth the discussion, as a point of some concernment in architecture: and that is, in what manner these Pyramids were built, and with what art and contrivance the stones, especially those vast ones in the first, were conveyed up. <sup>a</sup> *Herodotus*, who first raised the doubt, gives this solution: They carried up the rest of the stones with little engines made of wood, raising them from the ground upon the first row. When the stone was lodged upon this row, it was put into another engine, standing upon the first step: from thence it was conveyed to the second row by another. For so many rows and orders of steps as there were, so many engines were there: or else they removed the engine which was one, and easy to be carried, to every particular row, as often as they moved a stone. We will relate that which is spoken of either part. Therefore those in the Pyramid were first made, which were the highest; then by degrees the rest; last of all those which are nearest to the ground, and are the lowest. The first part of this solution of *Herodotus* is full of difficulty. How in erecting and placing of so many *machinæ*, charged with such massy stones, and those continually passing over the lower degrees, could it be avoided, but that they must either unsettle them, or endanger the breaking of some portions of them; which mutilations would have been like scars, in the face of so magnificent a building? His second answer is the founder; but I conceive the text to be imperfect. <sup>b</sup> *Diodorus* hath another fancy: The stones (saith he) at a great distance off were

prepared in Arabia: and they report, that by the help of aggeres (engines not being then invented) the work was erected. And that which begets the greatest admiration is, that so vast a structure was perfected in that place, which is all about replenished with sand, where there appear not any reliicks, either of the aggeres, or of the hewing and polishing of the stones: so that it seems not piecemeal, by the industry of men, but all together, and at once, the whole pile, as it were by some god, was erected in the midst of the sands. Some of the Egyptians relate wonders of it, and endeavour to obtrude I know not what fables; namely, that these aggeres, consisting of salt and nitre, were dissolved by letting in the river, which wholly consumed them without the labour of hands, leaving this structure (entire). But the truth of the business is not so; but that those multitudes of men, which were employed in raising the aggeres, carried them away unto their former places. For, as they report, three hundred and sixty thousand men were employed in these offices, and the whole work was scarce finished in the space of twenty years. *Pliny* partly agrees with him, and partly gives another answer. The question is, by what means the cement was conveyed up to such a height (he rather might have questioned, how those vast stones were conveyed up): some say, that banks of nitre and salt were made up, as the work rose, which being finished, they were washed away by the river (Nilus). Others imagine, that bridges were made with brick: which, the work being ended, were distributed into private houses. For they conceive, that the Nilus, being much lower, could not come to wash them (away). If I may assume the liberty of a traveller,

<sup>a</sup> Ἡερον τὰς ἐπιλοῖτους λίθους μηχανῇσι ξύλων βραχέων πεποιημένοι, &c. Herod. l. 2.

<sup>b</sup> Λέγεται ὅ τὸν μὲν λίθον ἐκ τῆς Ἀραβίας ἀπὸ πολλῆς διαστήματι κομιδῇναι, τὴν δὲ κατασκευὴν διὰ χωμάτων γενέσθαι, μὴ τῶν μηχανῶν ἐνυμμένων κατὰ ἐκείνας τὰς χεῖρας. Καὶ τὸ θαυμασιώτατον, τὸ τηλικαύτον ἔργον κατασκευασμένον, καὶ τὸ περιέχον τὸν τόπον πάντες ἀμυδρῶς οὐκ οἶδον, οὐδὲν ἴχνη οὐτε τὴν χάματι, οὐτε τῆς τῶν λίθων ξερουργίας καὶ λαξεύσεως ἀπολείπειν, ὥστε δοκεῖν μὴ κατὰ ὄγκον ὑπ' ἀνθρώπων ἐρρωσῆς, ἀλλὰ συλλήβδην καὶ ὅμῳ, ὡς περὶ ὑπὸ θεῶν τινος, τὸ κατασκευάσθαι τεθῆναι πᾶν εἰς τὴν περικύχσαν ἀμυν. Ἐπιχειροῦσι δὲ τινες τῶν Αἰγυπτίων τερατολογεῖν καὶ μυθεύειν ὑπὲρ τούτων, λέγοντες ὡς καὶ ἀλματι καὶ νίτρε τῶν χωμάτων γενομένων, ἐπαρθεῖς ὁ ποταμὸς ἐπηξεν καὶ διέλυσεν αὐτὰ, καὶ παντελῶς ἠράνισεν, ἀνευ τῆς χειρὸς ποιήτης περὶ χαλμαίας. ἢ μὴν καὶ τάλπηδες ἕως ἔχει, διὰ ὅ τῆς πολυχερίας τῆς τὰ χωμάτα βαλοῦσιν πάλιν τὸ πᾶν ἔργον εἰς τὴν προὔπερχεσαν ἀποκατέστη τὰξιν. Τειδονοῖα μὲν γὰρ καὶ ἐξ μυριάδων ἀνδρῶν, ὡς φασι, ταῖς τῶν ἔρῶν λειψυγίαις προσήδρευσαν, τὸ δὲ πᾶν κατασκευάσθαι τελεῖν ἔχει μόνις ἐτῶν εἰκοσι. Diodor. Biblioth. Histor. lib. 1. *Quæstionum summa est, quânam ratione in tantam altitudinem subvecta sint cimenta. Alii enim nitro ac sale adaggeratis cum crescente opere ac peracto, fluminis irrigatione dilutis: alii lateribus, è luto factis, extructos pontes, peracto opere, in privatas domos distributos. Nilum enim non putant rigare potuisse multo humiliorem.* Plin. l. 36. c. 12.



*GREAVES.* I imagine, that they were erected, neither as *Herodotus* describes, nor as *Diodorus* reports, nor as *Pliny* relates; but that first they made a large and spacious tower in the midst, reaching to the top; to the sides of this tower I conceive the rest of the building to have been applied, piece after piece, like so many buttresses, or supporters, still lessening in height, till, at last, they came to the lowermost degree. A difficult piece of building, taken in the best and easiest projection: and therefore it is no wonder, if it were not often imitated by the ancients, and no-where expressed or commended by the great master of architecture, *Vitruvius*. Yet, surely, if we judge of things by the events, and if we reflect upon the intention of monuments, which are raised by the living to perpetuate the memory of the dead, then is this as commendable a way as any. And therefore we see at *Rome*, that, tho', by the revolution of so many ages, the *Mausoleum of Augustus* be almost decayed, and the

*Septizonium of Severus* be utterly lost, both intended for lasting and stately sepulchres; yet the *Pyramid of C. Cæstius* stands fair, and almost entire: which is no more to be compared, either for the vastness of the stones, or the whole bulk and fabrick of it, with these, than are the limbs and body of a dwarf, to the dimensions of a giant, or some large *Colossus*.

I have done with the work, but the artizans deserve not to be pretermitted; concerning whom, the observation of *Diodorus* is as true, as it is boldly delivered by him. *It is confessed, that these works* (speaking of the *Pyramids*) *far excel the rest in Egypt, not only in the massiness of the structures, and in the expences, but also in the industry (and skill) of the artificers. The Egyptians think the architects are more to be admired than the kings who were at the expence: for they by their abilities and study, these by their wealth received by inheritance, and by the labours of others, erected them.*

<sup>c</sup> Admitting this supposition, we may easily apprehend, how those huge stones might, by engines, be raised in a perpendicular, as the work rose, with less difficulty and expence, than either in a slope or traverse line, upon banks of nitre, or bridges of brick, according to the traditions of *Diodorus* and *Pliny*: both which must have been of a stupendous and almost incredible height. *Suetonius in Augusto. Spartianus in Severo.*

<sup>d</sup> *Diodor. Sic. l. 1.* Ὁμολογᾶται ὅτι ταῦτα τὰ ἔργα πολὺ πλεονέχουσιν ὅτι καὶ αἱ πυλῶνες ἑμὴν τῶν βασιλέων καὶ καὶ ἀσκησμάτων, καὶ ταῖς δαπάναις, ἀλλὰ καὶ τῇ πολυτελείᾳ καὶ ἐξασπασμένων καὶ φασὶ δὲιν δαυμάζον μᾶλλον τὰς ἀρχιερέων καὶ ἔργων, ἢ τὰς βασιλεῖς τὰς παραγομένους τὰς εἰς ταῦτα χορηγίας· τὰς δὲ γὰρ ταῖς ἰδίαις ψυχαῖς, καὶ ταῖς φιλοτιμίαις, τὰς δὲ τῶν κληρονομηθέντων πλείω, καὶ ταῖς ἀλλοτρίαις κακίαις, ἐπὶ τελευτᾷ ἀσπείν τὴν προαίρεσιν.

## The CONCLUSION.

AND thus much of the *sciography*, or of the artificial and *architectonical* part: I shall shut up all with one observation in nature, for the recreation of the reader, recited by *Strabo*, in these words: *"We ought not to omit one of the strange things seen by us at the Pyramids: some heaps of stone, being fragments hewn off, lie before the Pyramids: amongst these are found little stones, some in the similitude and bigness of lentils, some as of grains of barley, which appear half unscaled: they report these are some relicks of the provisions which were given to the workmen, and have been petrefied; which seems probable enough."*

These, if there were ever any such, are either consumed by time, or scattered by the winds, or buried with those tempests of sand, to which the deserts are perpetually exposed: but *Diodorus*, who not long preceded him, was not so curious as to deliver this relation. And were not *Strabo* a writer

of much gravity and judgment, I should suspect, that these petrefied grains (tho' I know such petrefactions to be no impossibility in nature: for I have seen, at *Venice*, the bones and flesh of a man, and the whole head, except the teeth, entirely transmuted into stone; and at *Rome*, clear conduit-water, by long standing in aqueducts, hath been turned into perfect alabaster) are like those loaves of bread, which are reported to be found by the *Red Sea*, converted into stone, and by the inhabitants supposed to be some of the bread the *Israelites* left behind them, when they passed over for fear of *Pharaoh*. They are sold at *Grand Cairo*, handsomely made up, in the manner of the bread of these times; which is enough to discover the imposture. For the Scripture makes them to have been unleavened cakes: *"They baked unleavened cakes of the dough which they brought forth out of Egypt."* Or else *Strabo's* relation

<sup>a</sup> Ἐν δὲ τῶν δραβέντων ὅθ' ἡμῶν ἐν ταῖς πυραμίσιν παραδόξων ἐκ ἀξίων παραλιπῶν. Ἐκ γὰρ τῆς λαβύπτης σαρκοῖ τινες περὶ τῶν πυραμίδων κείμεναι ἐν ταῖς δὲ ἐνρίσκεται λίθιναι καὶ τυποὶ καὶ μεγέθει σαρκώδεις, οἷοις ὅτι καὶ αἱ ἀνθρώπων σφῶν ἡμιλεπίων ὑποβρέχεται φασὶ δὲ ἀπολιθαθῆναι λέγειται τῆς τῶν ἐρσάζομένων τροφῆς ἐκ ἀπίου δέ. *Strabo, l. 17. Geog.*

<sup>b</sup> *Exod. xii. 39.*



# The CONCLUSION.

651

may be like the tradition of the rising of dead mens bones every ° year in Egypt: a thing superstitiously believed by the Christians; and by the priests, either out of ignorance, or policy, maintained as an argument of the resurrection. The possibility and truth of it, *Metrophanes, the patriarch of Alexandria*, thought (but very illogically) might be proved out of the prophet *Esay*; <sup>d</sup> *And they shall go forth, and look upon the carcases of the men that have transgressed against me; for their worm shall*

*not die, neither shall their fire be quenched; and they shall be an abhorring unto all flesh.* <sup>GREAVES.</sup>

But I have digressed too far. The confutation of these, and the description of the *Mummies*, or of the rest of the *Egyptian* sepulchres (for from thence comes the matter of this their supposed resurrection), and that infinite mass, and variety of hieroglyphicks, which I have either seen there, or bought, or transcribed elsewhere, may be the ° argument of another discourse.

<sup>c</sup> *Sandys*, in his travels, writes, that they are seen to rise on Good-Friday. A Frenchman, at Grand Cairo, who had been present at the resurrection, shewed me an arm which he brought from thence; the flesh shrivelled, and dried like that of the *Mummies*. He observed the miracle to have been always behind him; once casually looking back, he discovered some bones carried privately by an *Egyptian*, under his vest, whereby he understood the mystery.

<sup>d</sup> *Esay* lxvi. 24. <sup>e</sup> An argument intended by me, and for which I made a collection of several antiquities in my travels abroad; but these (and would only these!) have unfortunately perished at home, amidst the sad distractions of the time.

A N D

D E N A R I U S

From whence, as from two Principles, the

MEASURES and WEIGHTS

Used by the ANCIENTS may be deduced.

By JOHN GREAVES, Professor of Astronomy

in the University of Oxford

Translated from his original Latin into English by

Una filia, pendula, mensura, mensura si non

Bochius de Moneta

A