In the Considerations of my first and second Propositions, the *Animadversor* hath rendred my Doctrine of *Un-equal Refrangibility* very imperfect and maimed, by explicating it wholly by the Splitting of rays; whereas I chiefly intended it in those Refractions that are perform'd without that suppos'd Irregularity; such as the *Experimentum Crucis* might have inform'd him of. And, in general I find, that, whilst he hath endeavour'd to explicate my Propositions *Hypothetically*, the more material suggestions, by which I design'd to recommend them, have escap'd his consideration; such as are, The Unchangeableness of the degree of Refrangibility peculiar to any sort of rays; the strict Analogy between the degrees of Refrangibility and Colours; the Distinction between compounded and un-compounded colours; the Unchangeableness of un-compounded colours; and the Assertion, that if any one of the Prismatique colours be wholly intercepted, that colour cannot be new produced out of the remaining Light by any further Refraction or Reflexion whatsoever. And of what strength and efficacy these Particulars are for enforcing the *Theory*, I desire therefore may be now consider'd.

12. *Some particulars recommended to further consideration.*

An Accompt of two Books.

I. *Ottonis de Guericke EXPERIMENTA NOVA MAGDEBURGICA, de VACUO SPATIO*, &c. Amstelodami A. 1672. in fol.

After that the famous Author of this Book hath made a Narrative of the chief *Hypotheses* and Opinions of both Antient and Recent Astronomers concerning the Systeme of the world, and represented the great difficulties in the *Ptolemaique* and *Tychonique*, and repeated the Answers to the Objections against the *Copernican*; he at large gives us his own Thoughts of the Frame and Constitution of the *World*; By which *World* he understands in this Treatise the Complex of the Planets, disposed and order'd much after the *Copernican* way, the *Sun* being seated in the midst, having his Spots about him, and moving and influencing all the rest of the *Planets* according to their several distances from him; *Saturn* making the utmost of all the Planets, and the End of this his World being there, where the diffusive power and vertue of the Sun, the King and Governor of them all, terminates; which bounds he conjectures to extend themselves, beyond *Saturn*, to those Fixt Stars that are of the nearer rank to *Saturns* Orbe.

Concerning the Bodies lodged in these Planets, he thinks it consonant to the Power and Wisdom of the Great Creator, that there should be such a variety of them, as to stock each of the said Planets,

with

with creatures differing from thoſe of others: ſo that nothing of what is in (e. g.) our Earth or Terr-aqueous Globe, is to be found in any of the other Planets, but that every one of them is ſtored with peculiar creatures, and even with ſuch reaſonable ones, as are of another kind from the Men of our Earth.

As to the *Space* that is between thoſe his Mundan Bodies (the Planets,) he conceives it to be not any thing Material or Corporeal, but a *Meer ſpace* void of all body, which *Space* he defines to be as 'twere the Univerſal Veſſel containing all Bodies; declaring herein his diſſent from *Des-Cartes*, in whoſe opinion *Space* or Extenſion cannot be without an extended ſubſtance: whereas he (our Author) makes *Space* indifferent to the being or not being filled with bodies.

Treating of this *Space*, which he calls *Void*, and eſteems ſo in its own nature, he maketh it Immenſe and Infinite: And diſcuſſing that ſo much agitated Queſtion, whether there be a *Vacuum*, he concludes it in the Affirmative, aſſerting, that not only all thoſe parts of his *Space*, to which the Effluvia or Expirations of his World do not reach, are void of all body, but alſo, that ſo much of Water, Air, or any other thing as is exhauſted out of veſſels, no other body ſucceeding in its room, ſo much there is of Vacuity there. To prove which latter, he repeateth in this volume many of thoſe Experiments of his, which the Learn'd *Schottus* had publiſh't before: adding ſome others, together with ſome improvements of his Engin; which was alſo deſcribed by the ſaid *Schottus*, and in which two very conſiderable things were deficient, as is obſerv'd by Mr. *Boyle*, the Noble Author of the *New Experiments Phyſico-Mechanical touching the Air*, p. 6, 7. in the firſt *Engliſh* Edition, printed A. 1660. at *Oxford*, and enrich't ſince, by the ſame, with a *Continuation of New Experiments touching the Spring and Weight of the Air, and their effects*, printed A. 1669. in the ſame place: Which two Treatiſes being compar'd with what hath been heretofore publiſh't by the aforeſaid *Schottus*, and now by this Author, it will eaſily appear to ſagacious and impartial Readers, to which of theſe two Gentlemen, Mr. *Boyle* and Monſ. *De Gericke*, the Curious are moſt obliged, there having been at firſt but ſix experiments made by the *latter* of them, publiſht by *Schottus*, in *Arte Hydrautico pneumatica*, about A. 1656; which afterwards were called *Antiqua* by the ſame, in his *Technica Curioſa*, printed A. 1662; in which are alſo recorded the other Experiments, call'd *Experimenta Magdeburgica Nova*, two years after Mr, *Boyles* lately mention'd *firſt* Book; the *Continuation* of which hath been abroad *three* years before this of *de Gericke* himſelf, now under conſideration.

Concerning our Authors Contrivance of his *Virunculus* or little Man, made to indicate the Weight of the Air at any time, and to foretell Wind and Weather; ſince he thinks fit to make a ſecret of it, we muſt let him enjoy it alone, till he ſhall think good to diſcloſe it.

But

But touching his Experiment of a New and before never uſed *Wind-gun*, (as he calls it) whereby, contrary to the common Wind-guns, in which by ſtore of well-compreſs'd Air, Bullets may be ſhot, he teacheth, that by evacuating and weakning the Air, the like effect may be produced; as to this, I ſay, the Reader will find the ſame Principle made uſe of by Mr. *Boyle* in his lately-mention'd *Continuation*, the fourth Experiment about a *New Hydraulo-pneumatical Fountain, made by the Spring of un-compreſſed Air.*

As to the Experiment related by this Author *l.* 3. *c.* 7. of making Water fall in *vacuo*, with ſuch a noiſe, as if it were a hard ſubſtance, it appears by the *Journal* of the *R. Society*, that ſuch an one was made before that Illuſtrious company by Mr. *Boyle* ſome years ago.

For a concluſion of this Accompt, *I* ſhall take notice of an Experiment, mention'd by our Author, *l.* 5. *c.* 15; by which he thinks may be repreſented the chief Vertues, he enumerates of our Earth, perform'd by a Globe of Sulphur melted and cooled again, and then perforated, to traject an Iron *axis* through it for circumvolution; whereby, attrition being uſed withal, he affirms that the Impulſive, Attractive, Expulſive, and other vertues of the Earth, as he calls them, may be ocularly exhibited. How far this Globe and its performance may be confided in, the Tryals and Conſiderations of ſome Ingenious perſons here may perhaps inform us hereafter.

II, *Theſaurus MEDICINÆ PRACTICÆ; ſtudio & operâ* Thomæ Burnet *Scoto-Britanni, M. D. & Medici Regis Ordinarii*: Londini *impenſis* R. Boulter *apud inſigne* Capitis Turcæ in vico dicto *Cornhill*, 1672. in 4o.

THis Learn'd and Induſtrious Author, having conſidered the ſeveral abilities of Phyſicians, and the different ways of their writings reſpectively; ſome delivering Medical Inſtitutions and Controverſies; ſome commenting upon *Hippocrates* and *Galen*; others publiſhing Methods of Curing Diſeaſes and Practical Phyſicks; others augmenting the Medical matter, and teaching the way of Preparing Medicines; many improving Anatomy; and not a few recording Obſervations and Conſultations: Having, I ſay, conſidered this variety and diverſity, he preferrs the laſt way of all as appearing to him moſt uſefuſ to Mankind; and therefore undertaketh in this Work of his to give us a Treaſure of Practical Phyſick, collected from the Obſervations and Advices of a great number of Phyſical Writers, both Ancient and Modern, ſuch as he eſteemed to be moſt conſiderable of that profeſſion. In the doing of which, he enumerates in an *Alphabetical* order about 410 kinds of Diſeaſes of humane Bodies, partly inward, partly outward; deſcribing their nature and ſymptomes, and declaring withal the ways of cure, as they are

to

to be met with in thoſe many Authors, he affirms to have carefully conſulted: Of which there are by him alledged no leſs than 117.

Amongſt all theſe Chapters of *Diſeaſes* and their Cures there are interſperſed many not common Obſervations of Nature, ſuch as are: *That* the force of *Caſtoreum* is ſuch, That about the Iſles of *Fero*, the Fiſhermen, when their Boats are endangered by Whales, throw ſome of that ſubſtance into the Sea-water, which being beaten with it, the Fiſh immediately ſinks to the bottom: *That* Vinegar may be preſerv'd from all worms, by mixing a little Theriac therewith, and ſo expoſing it in a cloſe veſſel to the Sun for a moneth, daily ſhaking it, and afterwards percolating it when ſetled: *That* there are men, that ruminate properly ſpeaking, like Beaſts that chew the Cud, and that ſome of ſuch perſons when opened after death, have either their *æſophagus* every where fleſhy like a Muſcle, or their ſtomach very rough and large; Where 'tis alſo obſerved, that one of ſuch ruminating men, did not at all chew the cud when ſick, juſt like Oxen and Cows, that are ſaid by country-people to do ſo neither, when they are not well: *That* a certain Sea-man, that had lived long at Sea, and contracted from a continual defluxion a Cough, which exerciſed his Lungs for two years, did at length caſt out, together with blood, two conſiderable ramifications of veins, ſeparate from all parenchymatous matter, ſhewing the corruption of the whole ſubſtance of the Lungs: *That* it hath been obſerved to be dangerous, to have a vein opened at once in both arms, or leggs, which is here called a *Neronian* Venæ-ſection, *&c.*

Errata to be corrected in *Numb.* 87.

Pag. 5067. *l penult,* Tractatu. *p.* 5068. *l.* 43. Demonſtratas. *p.* 5069 *l* 10. non *in AX. p.* 5070. *l.* 23. particularem vel defenſionem. *ibid. l.* 35. *pro* 2PQL *leg.* -2PQL. *ib. lin.* 29. *ad margin. lege,* Vide Tab. *II.* Fig. *III. p* 5071. *l.* 16. eſt media. *ibid. l.* 31 *pro* 1L $\sqrt{c\frac{1}{2}}$ *leg.* 1-$\sqrt{c\frac{1}{2}}$. *p.* 5072. *l.* 35. *pro* $\frac{4}{100000}$, *l.* $\frac{4}{100000}$, *p.* 5073. *l.* 18. *pro* quid. *l,* quin *p.* 5074. *l.* 23. 27. *&c. pro* σ T, *l.* 6T. *ibid l.* 23. *pro* ſ2, *l.* S2. *ibid. l.* 31. *pro* $\frac{L}{3L}$ D³ *l.* $\frac{L}{6T}$ D³ *p.* 5075. l. 2. *pro* $\frac{1}{4}$LD3, $l\frac{1}{4}$LD2 *ib. l.* 29. *l.* It. *pro* idem. *ib. l.* 39. *Hyperbola ſit Scalena.*

Errata in this Numb. 88.

Pag. 5087. l. 7. r. *Bodies.* p. 5094. l. 34. r. *it muſt.* p. 5097. l. 9. r: *and made to divaricate.*

LONDON,

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