to have lain in consequence of the head; but the knee of Caffiopea is now in v 13° 24' in antecedence of the Comet, whose Tail lay not therefore in consequence, but in antecedence of the line passing through its head and the Sun, at about an angle of 10 degrees.

Next Night, being that following the 23 of April, I again waited for the Comets rifing; but the Heavens were thick of scattered Clouds, and most where the Comet rose, so that I almost despaired of seeing it; till about \(\frac{3}{4}\) of an hour after two I saw its Tail, which appeared much shorter than last morning through a break of the Clouds; which soon after opening wider I saw the head too, and hasting I measured its distance. April 23 at 14<sup>h</sup> 51<sup>l</sup> p. m from Mirach 21°09!; but before I could get the plain of the Sextant to Algol, the Clouds came over the Comet again, and I could see it no more.

Hence, and from a course Observation of it sent me by an ingenious Friend, I sound its motion was direct, and its latitude decreasing. I hoped nevertheless I might see it again in the Evenings following, and waited for it; but though they proved sometimes clear I could never find it, and I believed, that hence forward to us it would be unobservable.

An Account of Some Books:

I. The Natural History of OXFORDSHIRE, being an Essay toward the Natural History of ENGLAND: By Robert Plot, LL. D. Printed at the Theater in Oxford, 1677, in fol. He worthy and learned Author of this Work, having very generoully undertaken to make a fuller and stricter survey of the Natural and Artificial things of England, than hath been made hitherto, and being induced to this undertaking by the confideration of advancing thereby both the knowledge of Nature, and the business of Trade; hath begun to execute this Noble design by giving us a very particular account of what occurred to him, for the most part upon his own personal enquiry, in Oxfordsbire. An attempt so considerable, that if it were purfued by fit persons all over the World with care, judgment and diligence, would in time produce a just History of Nature, and furnish both the Philosopher with good Materials to work with, and generally all forts of men with the pleafant and useful knowledge of the riches and wonders of the World.

The

The Method, observed by our Author in this County, and doubtless to be observed by him in others, is, that he considers, 1. Natural things, such as Nature either hath retained the same from the beginning, or freely produces in her ordinary course, as Animals, Plants, and the universal Furniture of the World.

2. Nature's Extravagances and Defects, occasioned either by the Exuberancy of matter, or Obstinacy of impediments, as in Monsters.

3. As Nature is restrain'd, forced, fashion'd, or determined by Artisicial Operations.

More particularly he observeth what is remarkable in the Heavens and Air, in Waters, in Earths, Sands, Clays, Stones: Again, in Trees and Plants, where he discovers several, unknown before at the Oxonian Physick-garden, and others not ordinarily found in this County; together with divers unusual grains sown in the same. Moreover, in Animals, with things uncommon, attending them. To all which he subjoyns many things of Art, he met with in this Country.

To give the Reader, out of this curious and vast Collection.a few Samples; I shall take notice, of an Echo, repeating distinctly 17 syllables in the day time, and twenty in the night, in Woodstock-park: Of Petrifying waters at North-Aston, Sommerton Go. Of a fort of Sand, which when washed and duly order'd, is fold by retail at 20 shillings a Bushel, at Kingham: Of excellent Fire- and Weather-stones, at Teynton and Horton: Of Marble, at Bletchington: Of Lapides Judaici, at Heddington: Of two forts of Pear-trees, bearing twice a year, the one at Stanlake, call'd the Hundred pound pear, the other at Latchford, called the Pear of Paradife: Of a rath-ripe Barley, fow'd and return'd again into the Barn in two months time, fetched from Patney in Wiltshire: Of a great spreading Oak, from boughs end to boughs end 108 feet; under the shadow of which,4300 men may sufficiently be shelter'd: Of a great Old Elm in Magdalen Colledge Grove, barked quite round for many years, and pithless, yet lives; and of another great Elm having three Trunks, issued out of one root, in St. Fohn Bapt. Colledge in Oxford: Of a white Linner, at Deddington: Of two Salmons, the one fomething above, the other fomething under, a yard in length, catch't in a small Brook that a man may easily step over, not above one furlong from the Spring-head, about 200 miles from the Rivers mouth, at Lillington-Lovel:

Of a Hog near thirteen hands high, at Upper-Tadmerton: Of a Cow, at Newington, which whilst a Calf, before she was eleven months old, produced another; which Animals carrying their burthen usually no less than 9 months, we must either admit, that this Cow took Bull at ten or eleven weeks old, or that the Cow her felf was at first brought forth pregnant of another. Of Deer in Cornbury park, which being for a while (in part at least) turn'd into a Cony warren, the Deer upon it had all dwarf heads, the most of them irregular, though the Deer themselves were well grown; but as foon as the Warren was destroyed by the present proprietor, the Deer came again to have as fair branched heads as any Deer whatever in the adjoyning Forrest: Of a Woman of fixty years old, brought to bed of a Son, both now living, at Shetford; and of another of 63 years old, then with Child, when the Author wrote: Of a Woman of 36 years of Age, married, wanting half an inch of a yard in height; born at Milcomb: Of some persons, whereof three are in the hundred year of their age; one, died at the age of 103; another, of the age of 112; a third, of the age of 114 years: See p.19 and p 212.

Of the things of Art, I shall here take notice, 1. of Sr. christopher Wrens contrivance of a Weather clock, in order to compose a History of Seasons; with observations which are the most healthful or contagious to Men or Beasts; which, the harbingers of Blights, Mildews, Smut, or any other accidents attending Men, Cattle, or Grain; so that at length being instructed in the Causes of these Evils, we may the easier prevent or find remedies for them. 2. Of a Clock lately contrived by Mr. John Jones, which moves by the Air, equally exprest out of Bellows: 3. Of Gunpowder invented by Fryer Bacon, and of the Telescope known to the same: 4. Of an Instrument of Sir Chr. Wrens, which measures the quantity of Rain that falls, which as foon as 'tis full, empties it self; whereby at the years end it is easie to compute how much has fallen upon such a quantity of ground for all that time; in order to discover the Theory of Springs, Exhalations, &c. 5. Of the Arts and Ways, by which the several sorts of Soyls are tilled in Oxfordsbire. 6. Of the Manufacture of the Stone- or Collen-wares, as Bottles. Juggs, &c. as also of the discover'd Mystery of the Hessian Wares, whereby Vessels are made to retain all forts of penetrating Salts and Spirits; likewise of an Art of making a certain English Earth as white and transparent as Porcellain: All three by Mr. Dwight, 6. Of an excellent way to prevent the firing of Ricks of Hay and Stacks of Corn; as also of several ways of preserving the latter from being eaten by Rats and Mice; whereof one is, by a peculiar kind of Rats-bane, that kills no Creatures but those for which it is designed, except Poultry: See p. 257, 259. 8. Of a fucces ful way of grafting white Frontiniac upon the Parsty Vine; and the early Red-cluster or Gurrant-grape upon the Fox grape. 9. Of a way of fatting Hogs with so much husbandry and so little trouble, that they cannot spoil a Bean. 10. Of a Mill, that grinds both Apples for Cider, and Wheat to Flower, which it fifts at the same time into four different finenesses; as also Oats, which it culs from the husk. and winnows from the chaff, into pure Oatmeal; lastly Muflard. All which is performed at Tusmore by one Horse and Man; together, or severally. 11. Of another Mill, that grinds Corn, cuts Stones, and bores Guns, altogether or feverally, at Hanwell. 12. Of a very ingenious device of making flat floors or roofs of fort pieces of Timber, continued to a great breadth without either Arch-work or Pillar to support them, being fustained only by the side-Walls and their own texture; by which means many times the defect of long timber, or mistakes of Workmen, are supplied and rectified without any prejudice to the building; together with a demonstration of this Work. given by Dr. Wallis in his Book De Motn. 13. Of the rare flat Floor of the Theatre in Oxford, unsupported by Pillars, and whose main beams are made of divers pieces of Timber, from fide-wall to fide wall 80 foot over one way, and 70 the other. whose Lockages are quite different from any other, and in many other particulars perhaps not to be parallel'd. 14. Of the curious and fignificant Painting of the Theater, largely explained. 14 Of the Art of finking a Colour a confiderable depth into the body of polisht white Marble, by application of it to the outside only; by Mr. Bird. 16. Of an invention of Esching, perform'd in a very curious and speedy way, by Sir Chr. Wren. 17. Of Mr. Lee's Loom of weaving Silk-stockings. 18. Of the Banqueting Trade improved at Witney. Account of the Starch-trade of Oxford. 20. Of a way of teaching deaf and dumb persons not only to understand what they

they read, but also to speak and read intelligibly, by Dr. Holder and Dr. Wallis. 21. Of the Invention of an Universal Character, or Philosophical Language, by Mr. Dalgarno and Dr. Joh. Wilkins. late L. Bishop of Chester. 22. A straight line found out equal to a Cycloid, by Sir Chr. Wren; and a straight line found equal to a Curve, by Mr. William Neil. 23. A new Method, called the Arithmetic of Infinites, for the more expedit and effectual Inquiry into the Quadrature of Curvilinear figures, or other difficult Problems in Geometry, by Dr. Wallis. 24. Of confiderable phænomena of Musick discover'd by Mr. Pigot and Mr. Noble, shewing, that though Viol- or Lute-strings rightly tuned do affect one another, yet most of them do it not in all places alike, as bath till now been supposed: Concerning which phænomena in all their cases, an exquisite solution hath been given by the Reverend and Learned Doctor Narcissus Marsh, Principal of St. Alban Hall in Oxford; which particular was for want of information omitted in Numb. 134 of these Trasts, where this matter was briefly spoken of and from whence the Reader ought to have been directed for more satisfaction to this History, we are now describing; wherein 'tis fully deliver'd, p. 288, 6 fegg. 25. Of the Invention of the Lympheducts, by Mr. Follif of Oxford. 26. Of the many excellent Difcoveries, made by Dr. Willis in his Book of Fermentation, of the Brain, of the Soul of Brutes, of the Pharmaceutice, &c. 27. Of Injecting liquors into the Veins of Animals, by Sir Chr. Wren; and of Transfusing Blood out of one Animal into another, by Dr. Lower. To all which the Author would have added the mention of some of the many and new Experiments of the Noble Mr. Boyle, had he distinctly known, which of them were made by him at Oxford.

The whole is concluded with a particular Chapter of the Antiquities to be found in Oxfordsbire; but having been already somewhat prolix in my account of this History, I must forbear to mention any particulars of that Chapter, and desire the Reader, to repair as well for this, as many other considerable Observations, to the Book it self.

II. L'ARCHITECTURE NAVALE, avec le ROUTIER des Indes Orientales & Occidentales: Par le Sieur Dassié; à Paris 1677, in 40.

He Author of this Book would have his Reader look upon it no otherwise than a small Essay or Forerunner of abundance

dance of excellent refearches of his Curiosity, which he saith he is preparing for the publick. His main design in this work he affirms to have been no other, than to reduce into Art, as methodically as he could, a Science so necessary and useful to the State, to render it familiar, and to quicken those that are knowing in the Mathematicks and in Naval Architecture, to enquire after infallible ways of making Ships sail better, and to find out the just weight of a Ships burden, and its true Symmetry, and so to bring this Art to persection.

The Order, by him observed in this Treaty, is this: In the first Book he delivers the Terms of Geometry, and the Use of the Compasses necessary to represent the plan and the proportion of a Ship; as also the usual Terms of Marine; the Desinitions of the several sorts of Vessels; the Proportions and Measures of all the parts of a Ship, exhibited in their several figures; a general Description of all the Instruments, Workmen, and other necessaries for equipping a Fleet to go to Sea; together with an account of the Charges of building a Man of War of 106, and of another of 115 seet by the Keel. To which is added a list of the Officers, necessary to command and defend a Man of War; as also the Number and Names of the Men of War and their Officers now in the service of his French Majesty.

In the fecond Book, he gives the explication of the Terms for the building of a Gally and Chaloup; and withal enumerates the feveral parts of them, represented also by their figures; adding likewise a general Description of all necessaries for sitting out such Vessels, so as to keep six Months at Sea; together with the Orders of his King touching the Salutes at Sea.

The third Book contains the Tables of Longitude and Latitude of Places, and likewise of the Tydes, and their Currents; together with the Routs, Courses and Distances of the principal Ports of all the four parts of the World, and the Shallows, Rocks and other dangers therein.

And forasimuch as the Building of Ships serves principally for Trade, the Author hath, for the sake of Merchants, annexed the Routier of the East and West-Indies, extracted out of the most modern and best Authors, containing above 30 Navigations, together with the proper Scasons to make those Voyages, and the several Soundings, Ankerings, and Sea-ports: Promising with all to publish in due time another Treatise under the Title of, The Stience of the Pilot.

Having thus given the Reader a general view of the whole, it may not be amis, to acquaint him with some particularities to be found in this Treatise. As,

- r. That in the first part of it there is to be found a particular explication of the Proportion to be observed in the building of Ships from 60 feet by the Keel, to Ships of 140 feet; and likewise of the proportion to be observed for Men of War, from 400 Tuns upwards to 2000 Tuns; together with a Table to find the proportions for Men of War of the several rates, and for the several parts of them, and their respective Guns.
  - 2. A List of the French Fleet in the year 1671.
  - 3. A List of the Men of War built since the year 1671.
- 4. A particular Discourse of the General motion of the Sea. which this Author, amongst many others, affirms to be from East to West, inclining towards the North when the Sun hath passed the Equinoctial Northward; and that, during the time the Sun is in the Northern Signs; but the contrary way, after the Sun hath repassed the said Equinodial Southward: Adding, that when this general motion is changed, the diurnal flux is changed likewise; whence it comes to pass, that the Tides in divers places come in during one part of the year, and go out the other; as on the coasts of Norway in the Indies, at Goa, Cochin-China, &c. where whilst the Sun is in the Summer-signs, the Sea runs to the shoar, when in the Winter-ligns, from it. On the most Southern coasts of Tunquin and China, for the fix Summer-months the diurnal course runs from the North with the Ocean: but the Sun having repassed the Line towards the South, the Course declines also Southward. Those that sail from the coast of Peru Westward, when the Sun is in the Equinoctial, have the Winds and Tides directly from East to West, between the Tropicks, and in a little time Ships arrive from the Molucques to Peru. But when the Sun is in the Northern figns, the course of the Sea and the Wind tends Northward: And the Sun being in his greatest declination, in the Tropick of Cancer, the Winds and Tides of the East extend themselves unto the 30th degree of Northern Latitude, and sometimes further. On the contrary, those that sail in the Southern Hemisphere, are obliged to approach to the Line to meet the Eastern Winds. Again, when the Sun hath passed the Line Southward, the Eastern Winds and Tides extend themselves unto the 40th degree of Southern Latitude; and therefore those

that navigate in the Northern Hemisphere, are constrain'd in the Pacifique Sea to decline Southward to the Equinoctial, to meet the Winds and Tides of the East for the Molucques and Philip-

pines.

- 5. Notice is taken, that, some years since, a motion hath been found in the Ocean, that gives a flight motion to the whole Ocean in general; not that 'tis visible, but yet sufficiently perceived by Pilots: Forasimuch as the English have observ'd, that they fail more speedily, with the same wind, in going from England to Spain, than from Spain to England. The Spaniards also have noted, that they sometimes went out of Spain into the West-Indies in 24 hours; but, that they could not return, how favourable soever the weather was to them, in less than four months.
- 6. Concerning the particular Voyages, described in the Routier above-intimated, they are, I. A Voyage from France to the Cape of Good Hope. 2. From the Cape of Lopo Gonfalues to the River Congo and Angola, on the coast of Guiny and Ethiopia. 3. From Lisbon to Malacca in October, to arrive there in April, which is the time that the West-winds reign on the Indian Coasts. 4. From the Cape of Good Hope to Mosambique and Goa, when one passeth betwixt the Firm land and the Isle of St. Lorentz. 5. From Mosambique to Goa in August; unto the end of which it is good to part, without staying any longer. 6. From Mosambique to Goa, in the end of March. 7. From the Cape of Good Hope, without the Isle of St. Laurentz, for Gea or Cochin. 8. Voyage toward the coast of Africa, when the Ship is East of the Garayes and of Saja de Malla, the season being past, and the provision spent, so that there is no likelyhood of a possibility of arriving on the coast of India, and that one is constrained to winter at Mombasa or Mosambique, which is the shortest way that can be taken. 9. From Mombasa to Goa, in March and April. 10. A voyage that may be made, when a Ship comes in the after-season to the Cape of Good Hope, and takes her course between Terra ferma and St. Laurentz. 11. From Goa to the Cape of Good Hope by Mosambique, passing between the Terra ferma and St. Laurentz. 12. From Cochin to the Cape of Good Hope by Mosambique. 13. From Gou to the C. of Good Hope, by passing without St. Laurentz, which is the old rout. 14. From the Cape of Good Hope to Lisbon, by the Isle of St. Helena, 15. From the Cape

Cape of Good Hope to Libon again, by the coast of Angola. 16. From Angola to Lisbon. 17. From Lisbon to Malacca, in Odober, to arrive there in April, which is the time of the Westwinds reign on the Indian Coasts. 18. From Lisbon to Malacca in the season of February and March. 19. From Malacca to Lisbon. 20. From Malacca to Macao in China, 21, From the Isles of Canton and the coast of China towards Nyngpo and Nanquin. 22. From Lampacon near Macao towards Fapan, as far as the Isle of Firando. 23. From Macao to Japan and the Isle of Cabexuma, as far as to the Haven of Languasaque. 24. What course is to be taken to enter into the haven of Languafaque in Japan. 25. Rout held by the Pilots from Provence to the East-Indies. 26. From the Isle of Gomera, one of the Canaries, to the Antifles, and thence to Cartagena, and Nombre de Dios, and so to the Havana. 27. The course and true marks from the Isle Desirada, as far as the coast of Cartagena, Nombre de Dios, New Spain, and the Canal of Havana. 28. From Gage Vert to Brasil, and to know the Coast and Havens of the said Country of Brafil, as far as to the River della Plata, 29. From Todos los Santos, on the coast of Brasil. 30, From Rio des Ilhas, on the same coast. 31. To the haven, Porto Seguro, on the same coast. 32. To the haven called Spirito Santo, on the same coast. 33. From Spir. Santo to the Bay of St. Vincent. 34. From the Cape Frio, as far as Rio della Plata, with the particulars thereof. 35. The Ankrings and Soundings in the Roads and Havens of the Mare Glaciale and the White Sea. 36. The Soundings of the Havens of the Baltique, and the German Sea; as also of the Coast of England, beginning from the Cape of Cornwall, and so on; likewise of Ireland, France, Biscay, Gallicia, Portugal, the Coasts of Africa, the Isles of Tercera and the Ganaries, of America, and particularly of Virginia, Florida, and New Spain.

III. Philosophical Dialogues concerning the PRINCIPLES of Natural Bodies; by W. Simpson, M.D. Lond. 1677.

He Learned and Industrious Author of these Dialogues endeavours to deliver in them a confirmation of the Corpuscularian Philosophy, taking-in Seminal Principles and Fenments to make up the generality of Mixt bodies in the World. Where he understands by Seminal Principles certain minute portions of Acid and Sulphur, concentred and wrapt up by the Author

Author of Nature in small rayments of Matter, which Principles are to him the Mechanical Agents included in all those bodies commonly called Seeds; not but that these Principles themselves are also material, and, in his opinion, ultimately reducible into Water (which he would have the Material Principle of all Concretes,) but with this difference, that they are pure and very subtile parts (engaged in grosser ones) adapted for that motion; which he supposes absolutely necessary in the fabrick of all Mixts. By Ferments he means the aforesaid Principles, (or Seminal sparks hidden in matter) actually put into motion, and by the variety of that motion producing the variety of bodies.

This fignification of his Seminal and Fermental principles he illustrates by the Generation both of Vegetables and Animals; esteeming the said generation to be no other than a natural Evolution or Expansion of the implanted Seminal principles contained in the minute Seed or Embrio, and rendred fruitful or prolific by the odour of a spirituous ferment. So that these Seminal Principles, carried on by a mutual collision of Mechanical Agents, are, to him, the very groundwork of all natural Fire in bodies, and that these little Fires, harboured in so many minute portions of Matter as there are variety of things, give motion and vigour to every body wherewith they are cloathed. Moreover, the Author confidering Bodies in their Generation, and Mutation, and reducing them to their feveral Classes, he finds, there are seven Complications, or seven ways of Aggressions of his Principles, Acids and Sulphurs; and confequently formany forts of Fires, hid in the bosom of things, according to those seven Modifications of the Principles, by which they variously combine to the raising of bodies, and to the dissolving of them again.

And these seven Complications he thus reckons up: The first is, when the Principles combine in such a peculiar Collision, as that the Ethereal matter is interwoven therewith, and is somented by a continual supply from the perpetual circulation of that Æther; of which fort he makes the Solar Fires to be, because made from the same principles that the Solar rays are: such as Light and Heat in the Macrocosin.

The fecond is, when the aforefaid Principles do accost each other by a gentle collision, either progressive from the Center,

as Generation; or retrogressive from the superficies, as Putre-faction.

The third is, when the Principles by a stronger and more sensible collision hit each other; which he distinguishes into Natural and Artiscial; the sormer, such as is manifest among Vegetables in their ripened Juyces, whose principles struggle (in our Authors language) with stronger collisions: The latter, such as is seen in every effervescence between factitious Alcalie's and Acids.

The fourth is the most high and rapid motion the Principles are capable of, and whence results the ratio formalis of Culinary or common Fire; and by which complication the phænomena belonging to that Fire, may be solved.

The fifth is, when the Principles, after they are by the most rapid collision brought to an ignition, are transmitted from their own into other bodies, where having penetrated, they are by a kind of fixation locked up, and so become the causes of divers phanomena; as it is apparent in the Calces of Mettals

made in forma sicca, as of Lead, Iron, Mercury, &c.

The fixth is, when the Principles are complicated by a certain colliquation; thence by our Author called Ignes colliquativi, and by him distinguish t in Caustical, Corrosive, and Putrefattive. The first again into Lixivial (as the fixt Alcalies of Plants, fixt Nitre, Calx vive,) and Vesicatory, as Chymical Oyls, Cantharides, and some Plants. The second (which are the Corrosive) take their original from Mineral principles colliquated by force of Fire; whence all corrosive Menstrua. The third, namely the putrefattive, is made threefold again, Pestilential, Venemous, and properly Putrefattive: Concerning all which, he refers us to his Tentamen Physiologicum, intended to be published by him.

The feventh and last complication is, when the Principles are fixed by an intimate and radical union; whence arise Fires sui generic, which by reason of the fixity and the inseparable connexion of the principles, suffer no deslagration of parts, nor any injuries by our strongest fire; such as to him are the Philosophical Elixir, the liquor Alkalest, and the Mercurius Philosophical Elixir,

phorum.

So far his Seven Complications; which whether they are confonant to the nature of things, and comprehensive enough to expli-

explicate all phænomena of the World by, must be left to the professed and sagacious Searchers of Nature to determine.

IV. A New Treatise of GHYMISTRY, &c. written in French by Christopher Glaser, and now faithfully Englished by F.R. S.

London, 1677. in 80.

His Author having reflected upon the causes, why many have declaimed against Chymical Writers and even against Chymistry it self, maketh it his business in this Treatise to publish a short and easie method for the happy attainment of all the most necessary preparations of Chymistry; assuring us, that the considering Reader shall find therein nothing tedious, superfluous, or defective in any matter that deserves to be known, and that, though indeed the Preparations of all Chymical matters cannot be found therein, yet sufficient Examples of them will be had from it; affirming withal, that he hath deliver'd no operation, but what he has made and well experienced himself, and what any one, following the Rules by him prescribed, may do after him.

As for the Theory, he speaks succinedly, yet seems to say so much of it as may suffice for direction to the Preparations: performing his operations on Minerals, Vegetables, and Animals, and proceeding therein orderly, without omitting any

necessary directions.

Advertisement.

ISTANCES WITHOUT SCALE and COMPASS: I A New large Map of England full six foot square, wherein computed and measured Miles are entred in figures: Designed by Mr. John Adams in the Inner-Temple. Sold by Mr. Gregory King at the East corner-Piazza house of Jame's-street Covent-Garden; Mr. John Smith Teacher of the Viol and Guittar at the Mermaid, next door to the Bull-head Tavern in Cheapside; Mr. Thomas Basset at the George near St. Dunstans Church in Fleetstreet; and Mr. Richard Chiswel at the Rose and Crown in St. Pauls Church-yard. Price ready made up Two Guinies.

## Imprimatur,

May 31. 1677.

JONAS MOORE R.S.V.Pr.