

seen together. 4. In the Method of setting it exactly perpendicular to a *Second*, if need be. 5. In its *Fixation* and *Motion*, it being so fixed and moved, that, if once set to the Objects, it continues to move along with them, as long as 'tis necessary to continue, or be very certain of, any Observation. 6. In its being to be made and adjusted without difficulty, and not to be put out of order without design; as also in its great easiness of being rectified and again adjusted. 7. In its being not very chargeable.

All these perfections the *Author* explains, and endeavours to make good, by describing and delineating this Instrument and all the parts thereof, and endeavouring to obviate such exceptions, as he fore-saw might be made against it. To all which he annexes occasionally something that relates to the priority of the Invention of the *Circular pendulum*; and likewise a Description of a Wheel-work, which, *he saith*, may be called the perfection of such work, having the perfectest Idea, he thinks, that toothed Wheel-work is capable of, performing the same effect, as if the Wheel and Pinion had an indefinite number of Teeth. Which done, he describes the Frame for keeping the Instrument, which is the main Argument of this Book, in its Perpendicularity, and yet always in the *Azimuth* of the Cælestial object; with a Digression of the great Use of this Principle in Dialling, Equalling Time, Clock-work, &c.

He mentions also a Mechanical way, he hath, of calculating and performing *Arithmetical* operations, much quicker and more certainly, than can be done by the help of *Logarithmes*.

He concludes the whole by shewing divers of the particular Uses of this New Quadrant, as 1. For measuring the Refraction of the Air. 2. For regulating the Places of the Fixt Stars and of the Planets. 3. For stating the Latitude of Places. 4. For examining the Influences of the Planets on the Earth. 5. For measuring the quantity of a Degree upon the Earth. 6. For measuring seen Distances. 7. For Levelling. 8. For taking the Diameters of the Sun, Moon, and other Planets. Where, by the by, are mention'd two other Instruments, one for taking Diameters to *Seconds*; the other, for looking on the body of the Sun without harming the eyes.

*Errata left uncorrected in Numb. 108.*

Pag. 170. l. 20. r. *Stores of Salt*. p. 185. l. penult. r. *sometimes to the thickness of a stem*. p. 187. l. 15. r. *bought*. *ibid.* l. 30. r. *did coagulate*.

L O N D O N,

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