

From this Principle it will be easie to calculate the several strength of Bows, as of Long Bows or Cross-Bows, whether they be made of Wood, Steel, Horns, Sinews, or the like. As also of the *Balista* or *Catapulta* used by the Ancients, which being once found, and Tables thereof calculated, I shall anon shew a way how to calculate the power they have in shooting or casting of Arrows, Bullets, Stones, Granadoes, or the like.

From these Principles also it will be easie to calculate the proportionate strength of the spring of a Watch upon the Fusely thereof, and consequently of adjusting the Fusely to the Spring so as to make it draw or move the Watch always with an equal force.

From the same also it will be easie to give the reason of the *Isochrone* motion of a Spring or extended string, and of the uniform sound produced by those whose Vibrations are quick enough to produce an audible sound, as likewise the reason of the sounds, and their variations in all manner of sonorous or springing Bodies, of which more on another occasion.

From this appears the reason, as I shall shew by and by, why a Spring applied to the balance of a Watch doth make the Vibrations thereof equal, whether they be greater or smaller, one of which kind I shewed to the right Honourable the Lord Viscount *Brounker*, the Honourable *Robert Boyle* Esq; and Sir *Robert Morey* in the year 1660. in order to have gotten Letters Patents for the use and benefit thereof.

From this it will be easie to make a Philosophical Scale to examine the weight of any body without putting in weights, which was that which I mentioned at the end of my description of Helioscopes, the ground of which was veiled under this Anagram, *c e d i i n n o o p s s t t u u*, namely, *Ut pondus sic tensio*. The fabrick of which see in the three first figures.

This Scale I contrived in order to examine the gravitation of bodies towards the Center of the Earth,

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viz. to

