RIGHT HONOURABLE ROBERT, EARL of ALISBURY, &c.

My LORD,

VER since I have undertaken to publish the Philosophical Transactions, I have been concerned, once a year, to seek out a Noble Patron, to whose favour 1 might with good assurance address the Collections of the whole Year, when sinished. And for this present Volume, I cannot devise better than to lay it before Your Lordship, who doth perfectly apprehend, How the genius of this Age hath countenanced the Restauration of Noble Arts and of good Literature, and that the English Nobility and Gentry have constantly shew'd a willingness to be the Example, (as it was first Islustrated and best Recommended by a Peer of England, the Lord Viscount of St. Albans;) and that great and deep Wits in all Forrain parts round about Us, and in many Remote places, do drive it on with no slow pace; the Emulation working high every where, and performing to admiration.

This being so well known to Your Lordship, I am perswaded, It will be a divertizing Entertainment, to take notice of the Yearly Growth of Philosophy, and of Philosophical Aids, in substance and in extent, with fresh supplies continually; to observe, that the Ingenuous do hold on in a Real Progress, and to remark, how, where, and by whom all Novel Inventions have their Rise, and by what Steps and Expedients they are promoted: Which is the best of Human helps, to excite, encourage and enable for other beneficial Inventions: And 'tis an ingenuous delight, to see the Virtuous advance with good Speed. The Philosophical Poet Lucretius said in his Rapture;

lib.2. Suave, mari magno, turbantibus æ quora ventis, E Terra magnum alterius spectare laborem!

The Poet esteems it a deep pleasure, to behold (as from a safe harbour on firm land) the deviations and collisions of profound and industrious Philosophers in all former Ages. And certainly it must be a more Natural and a more agreeable pleasure, and far greater happiness, to behold the fervent and sedulous Emulations of the most Civil and most Accomplished Nations (and of the acutest, the deepest and the most learned amongst them,) contending with all their strength and skill, who shall excel the other in the most beneficial obligings of Mankind.

My LORD, I doubt, it will be expected, I should here represent to Your Lordships eye a hint of just applause for the great Merits of those Worthies, who have so happily brought-in their fresh supplies: But I must confine my self to a few soft Touches, which he most reserved Modesty may justly claim,

and which Malice it self cannot deny.

Here

Here then we have the accurate Observations of some judicious and learn'd Travellers. Excellent Instructions for generous Travellers. We bave feveral Estays towards the Natural Histories of Countries, (which is the main drift of our humble suit at the beginning of this Volume;) of Mineral Waters; of some Animals, chiefly by Anatomical inspection. And the curious Anatome of Plants is here confirm'd, in some main Points, by good Microscopes. And we have here fair promises of improving Telescopes. which have already so much enlarged Astronomical knowledge; as the Microscope bath detected a great part of this babitable World, which bath been hitherto Invisible. And an Honourable Person of our Number, bath given us a probable Account of the System of the World from the Suberficial Figures of Fluids, and from contiguous Liquors. And he harb most convincingly discovered the Origin and Mechanical deduction of Qualities, substantially proving, that the famous Authors of Elder times did not throughly discern or consider the True processes of Nature in Generals. And the Same hand puts a stop to the Neoteric Notions of Chymists, since they agree not with the verity of Experiments. The New Theory of Light and Colours is fill maintain'd by Optical Experiments: And the flaming Tincture of Light strangely transmitted from Dead and unputrified flesh to Living Members merely by contact: And Luminousness more strangely impressed, for a time to reside in a factitious Body. The Mathematicks run on their course still, in fresh ground. Astronomy wants no encouragements. and hastens to perfection. Physick, Anatome, and Medicine, obtain New Tiscoveries; and after Zwelfer, Schroder, and many more ancient and famous Distensatories, the Industrious Charas bath from much experience prepar'd an ample Pharmaceutice. And the Philosophers of Germany go on to increase their Curiosities. Aristotle's own Natural philosophy preferr'd before the Commentaries of Schoolmen; and the Cartelian before the Aristotelian. A French Water-Engin to quench Fires. Two Newly devised Hygroscopes. An Essay or endeavour to explain the Use of the Inclinatory Needle, for great Uses.

My LOKD, I shall pass by other particulars, and conclude with that which is herein solicited as the main business of every good man; namely, to adorn his own Country with the best and most substantial Improvements. Of these, Agriculture is the surest, the most in our power, and the most sundamentally necessary of Domesticks; the Hortulane, best becoming the hands and care of the Generous; And Trade and Commerce do maintain the Multitudes, raise the value of Lands at home, and render us most considerable abroad. In both these respects, we have here given some Additional accounts: For the Mysteries and Intrigues of Trade, more than I have been able to dive into: And all England would rejoyce to see Trade revived, and reaching all over the World: Which seems to be the honest design of the late Author of Englands Improvement by Sea and Land.

My I ORD, I cannot doubt of your Lordships favourable Patronage in all concernments for the good of England: And since Your Lordships countenance contributes much to promote all our Affairs; this bath given me a considence to make this address, and to entitle my self; My Lord,

Your Lordships very humble and faithful Servant,