An Experiment
Of making Cherry-Trees, *that have withered fruit, to bear full and good fruit; and of* Recovering *the almoſt withered fruit.*

Communicated by the ſame, as follows:

Anno 1665, I made the following Experiment with 3 *May-Cherry-Trees* (planted in a rich Mould) which lay to a South-wall, ſhaded 4 Winter-Moneths from the Sun by a high Building, ſo that the Sun came not on them, till the beginning of *March*, when being high, and ſhining ſomewhat fiercely upon them, the fruit conſtantly withered for ſome years before. Now this year, the ſeaſon being very hot and dry, I bared the roots of *one* of them, by making a hole about it, and watered it every Morning and Evening with about a *Gallon* of water, for about a fortnight before the Cherries came to redneſs, and the fruit was full and good. The other *two* Trees, left without this ordering, had moſt of their fruit withered, having onely skin and ſtones. Now to try this Experiment farther, I made a hole round about *one* of the other Trees, and fed it with water daily, as the former: In a Weeks time, thoſe that were quite withered, fell off, and the reſt, that were not ſo, grew and increaſed exceedingly; the *other* Tree, that was not uſed after this manner, had not any of its fruit come to perfection.

An Experiment
On Aloe Americana Serrati-folia *weighed; ſeeming to import a* Circulation *of the Sappe in* Plants, *by the ſame Dr.* Merret.

Auguſt 4. 1656. this *Aloes* weighed 21 *Ounces*, 6 *Drams*, 2 *Grains*. Its colour was of a pale-green, conſiſting of 11 Leaves; it was bound about with a red dry Cloth, and was hung up without Oil, as is uſual, in the Kitchin.

Auguſt

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		Weight.				Loſs.	
		Ounc.	Drams.	Scrup.	Grains.	Scruples.	Grains.
Auguſt	19.	21	3	0	24	3	27
Septemb.	6.	21	1 ½	0	0	1	14
February	20.	21	1	0	12	0	11
March	16.	21	0	2	0	0	32
April	8.	21	0	0	0	0	40
May	1.	20	7	0	0	1	0
May	28.	20	5 ½	0	0	1 ½	0
June	12.	20	4	0	4	2	26
July	1.	20	1	0	8	2	18
July	20.	19	6	0	1	3	7
Auguſt	4.	19	3	0	12	2	49

So that in a whole year it loſt 2 *Ounces*, 3 *Drams*, 24 *Grains*. The ſucceeding year being drier and hotter, it loſt 3 *Ounces*, 2½ *Scruples*, and more than double in the 6 colder, than the 6 hotter Moneths. I kept it about 5 years, and it decreaſed much about the ſame proportion. And in the year 1660, hanging it in a colder Garret, it periſhed.

Theſe Obſervables I had about it, that every Year two of the greater Leaves firſt changed Colour, and wither'd; and in the Spring-time, there grew out two very freſh and green ones, never amounting to the bignes of any of the precedent; inſomuch, that all this time I had the ſame number of Leaves. And then, theſe new Leaves were more freſh and green, and not ſerrated, and thicker alſo in proportion to their other Dimenſions. Whence perhaps it may probably be inferr'd, *vid.* from the growth of theſe latter Leaves, that there is a *Circulation* in this Plant of the *Succus nutritius*. For, how is it poſſible, that the Roots, continuing as firm and ſolid as at firſt, ſhould ſupply ſo much nouriſhment, as to procreate *new* Leaves, unleſs it were from the return of the ſaid *Succus*, from the old and decaying Leaves, into the Root, and there protruded for the production of new ones? For, all *Bulbous* Roots, as Garlick, Onions, Tulips, and eſpecially Squils, who protrude their Leaves, placed in a Shop or Houſe, have their Roots lighter, and more ſpungy; the

the Leaves being formed out of the ſubſtance of the Root, as a Chick out of the *Albumen*; in the mean while the whole decreaſing in weight, as in the aforeſaid *Aloe*; as 'tis manifeſt by many Experiments made by me.

An Extract
Of a Letter, written by Mr. Richard Towneley *to Dr.* Croon, *touching the Invention of* Dividing a Foot *into many thouſand parts, for* Mathematical *purpoſes.*

FInding in one * of the laſt *Philoſophical Tranſactions*, how much M. *Auzout* eſteems his Invention of dividing a Foot into near 30000 parts, and taking thereby Angles to a very great exactneſs; I am told, I ſhall be look't upon as a great Wronger of our Nation, ſhould I not let the World know, that I have, out of ſome ſcatter'd Papers and Letters, that formerly came to my hands of a Gentleman of theſe Parts, one Mr. *Gaſcoigne*, found out, That before our late Civil Wars, he had not only deviſed an Inſtrument of as great a power, as M. *Auzout*'s, but had alſo for ſome Years made uſe of it, not only for taking the Diameters of the Planets, and Diſtances upon Land; but had farther endeavour'd, out of its preciſeneſs, to gather many Certainties in the Heavens; amongſt which, I ſhall only mention one, *viz.* The finding the *Moons Diſtance*, from two Obſervations, of her *Horizontal* and *Meridional Diameters:* Which I the rather mention, becauſe the *French Aſtronomer* eſteems himſelf the firſt that took any ſuch Notice, as thereby to ſettle the *Moons Parallax*. For, our Countrey-man fully conſider'd it before, and imparted it to an Acquaintance of his, who thereupon propoſed to him the Difficulties that would ariſe in the Calculation; with conſiderations upon the ſtrange Niceties, neceſſary to give him a certainty of what he deſired. The very Inſtrument he firſt made I have now by me, and two others more perfected by him; which doubtleſs he would have infinitely mended, had he not been ſlain unfortunately in His late Majeſties Service. He had a *Treatiſe*

* Vid. Numb. 21. p. 373.