

Nolim autem ut hæc malo animo dicta putes, sive in Heuratium (qui mihi neque beneficio neque injuria notus est,) sive in Cl. Hugenum, quem magni semper habui, atque habiturus sum, & amicissimè semper tractavi; ejusq; atq; inventorum suorum non iniquus fuerim estimator; nedum in Fermatium, summum virum: sed ut nuda veritati testimonium perhiberem, Nelioque jam demortuo; iisque ex nostris omnibus, qui, jamdiu ante Heuratium, id ipsam demonstraverant; atque, ne mala fidei habear, in ea quam hac de re narrationem prius edidi. Vale.

Two other Letters to the same purpose with the former: The first of the Right Honourable the Lord Vis-count Brouncker, Chancellor to her Majesty, and President of the R. Society, &c.

S I R,

IT is very sure, that Mr. *William Neil* had in the year 1657. found out and demonstrated a Streight line equal to a Paraboloid; and did then communicate and publish the same (though not in print) to my self and others, who used to meet at *Gresham* Colledge, and it was there received with good approbation; and the same was, presently afterwards, otherwise demonstrated by my self and others: And therefore ancienter than that of Monsieur *Heurat*, which (as it seems,) is not pretended to have been done before the year 1659; and ancienter too than that of *Sr. Ch. Wren*, finding a Streight line equal to a Cycloid in the year 1658; and by him admitted so to be. Nor ought it at all to prejudice Mr. *Neil*, that M. *Heuraet's* was somewhat sooner abroad in print, than that of M. *Neil*, (though both in the same year 1659;) since it is well known to many of us, that Mr. *Neil's* was done before. Otherwise M. *Hugens*, by the same reason, will grant the precedency to *Heuraet*, of that which he now claims to be his own invention (that Rectifying the Parabolical Line and Squaring the Hyperbolical Space do mutually depend on each other :) for this was published in print by M. *Heuraet* (or M. *Schooten* for him) in the year 1659, and not by M. *Hugens* till now, 1673: And yet M. *Hugens* thinks, he may well claim that invention to be his own, because he now tells us, that he found it out about the end of the year 1657, and did (some time after) communicate it privately to some friends. And whereas, he doth suppose, that this invention of his might give occasion to that other of *Heuraet*; we may also as well suppose, that he might have taken such occasion from hearing of Mr. *Neil* having done the like, (for this had been then commonly known for a great while:) Or might have taken occasion (as well as Mr. *Neil*) from that of *Dr. Wallis Schol. prop. 38. Arith. Infin.* or from that of *Sr. Ch. Wren* having found a Streight equal to another Curve the year before: Or, if it were necessary to know their symbolization between the Parabolical Line and the Hyperbolical Space; he might have had it earlier from *Dr. Wallis*. For, when he had demonstrated (*Schol. prop. 38. Ar. Infin.*) that the Particles which compose the

X x x x x x 2

PARA-

Paraboliſal line, are in power equal to a *Series of Squares increased* by a ſeries of Equals, ſuppoſe $\sqrt{A^2 + b^2}$: And (*prop. 35, 41. Conic. Sect.*) that *c* the Ordinates to the Conjugate Diameter of an Hyperbola, (that is, the particles of which that Hyperbolical ſpace conſiſteth,) are ſo alſo, *viz.* $\sqrt{\frac{1}{4}T^2 + \frac{1}{L}h^2}$: (where *A, T, L*, are permanent quantities, and *b, h*, taken ſucceſſively in Progreſſion Arithmetical;) It was eaſie (for *M. Heuraet*, or *M. Hugenſ*, or any other,) to infer, That, if we can Rectifie the one, we may Square the other, & *vice verſa* But from whence ſoever *M. Heuraet* had it; we may, as before, reaſonably conclude, that *Mr. Neil* had it before him: And *M. Hugenſ* is a perſon of that ingenuity, that, when he ſhall better conſider of it, he will (I doubt not) be of the ſame mind. *London, Oct. 8. 1673.*

*The other Letter is of Sr. Chriſtopher Wren Kt. Surveyor General of his Ma-
jeſties Buildings, &c.*

S I R,

THAT I did, in the year 1658. find a *Streight* line equal to that of a *Cycloid*, and the parts thereof, was then very well known, not in *England* only, but in *France* and *Holland*. And I have not yet heard of any, who do pretend to have known it, before I diſcover'd it: which was the ſame year acknowledged in Print by thoſe of *France*. But I do not pretend to have been the *firſt* that did ever find a *Streight* line equal to a *Crooked*. For I very well know, that *Mr. William Neil* had, the year before, found out and demonſtrated, How to conſtruct a *Crooked* line ſo as to be equal to a *Streight*, by a certain ſeries of Numbers after the method of *Dr. Walliſ*. And though *He* did not there- in demonſtrate the other properties of that Line; yet the ſame were preſently after demonſtrated by my ſelf and others, and the nature of the Line fully diſcover'd, being a certain *Paraboloeid*. And that which *M. Heuraet* is ſaid afterwards to have found out, in the year 1659, and *M. Fermat* in the year 1660, are but the ſame with that of *Mr. Neile*.