Mr. OZANAM (J. T. DESAGULIERS), CURSUS MATHEMATICUS 1712



"*Cursus Mathematicus:* OR, A Compleat COURSE OF THE MATHEMATICS. Vol. V." is a book with two sections, Geography and Dialling. It has been translated from the French of J. T. Desaguliers by Mr. Ozanam.

A T R E A T I S E O F GNOMONICS.

CHAPTER I.

Of the Lemma's.

LEMMA I.

THEOREM

If a great Circle of the Sphere be perpendicular to the Plain of the Dial, it will be represented on it by a Right-line, which will go thro' the Foot of the the Style.

LEMMA II.

THEOREM

If of Two great Circles of the Sphere, which are



Plate 24

perpendicular to one another, the one be perpendicular to the Plain of the Dial; their Representations will be Two Right-lines perpendicular to one another.

LEMMAIII. THEOREM

A Right-line, which represents upon a Plain a great Circle of the Sphere, may be Geometrically divided into such inequal Parts as shall represent the Degrees of that great Circle.

LEMMAIV.

THEOREM

If from Two Ends A,B, of the Base AB, of the Triangle ABC, you draw thro' the point E (taken at pleasure upon the perpendicular CD, which falls within the Triangle,) the lines AF, BG, and join the lines DF, DG; the Angle CDF will be equal to the Angle CDG, or the Angle ADG to the Angle BDF.

These Lemma's continue in a similar format from $I \mbox{ to } XVI \mbox{ with 21 pages of tables, being -}$

- A Table of the Declination of all the Degrees of the Ecliptick.
- A Table of the Declination of the Diurnal and Nocturnal Arches for different Latitudes.

Number of Pages: 131 Page Size: Illustrations: 30 plates A Table of the Horary Arches, for evnry Degree of Latitude.

A Table of the Eastern Amplitudes, for different Latitudes.

C H A P T E R I I. Of Horizontal Dials.

In this Chapter are a list of Problems from I to $\boldsymbol{X}\boldsymbol{X}$ with three pages of tables -

A Table of the Angles Refracted in Water.

- A Table of the Distance of the Sun from the Zenith, every Hour of the Day, for the Latitude of 49 Degrees.
- A Table of the Verticals of the Sun, counting from the Meridian, at every Hour of the Day, for the Latitude of 49 Degrees.

CHAPTER III.

Of Erect, or Vertical Dials.

In this Chapter are a list of Problems from I to \ensuremath{IX} with one page of tables -

A Table of the Height of the Sun above the Horizon, at every Hour of the Day, calculated for 49 Degrees Latitude.

CHAPTERIV.

Of Inclin'd Dials.

In this Chapter are a list of Problems from I to IX.

CHAPTER V.

Of, the Description of the Arches of the Signs, and other Circles of the *Sphere*, in *Dials*.

In this Chapter are a list of Problems from I to $I\!X$ with two pages of small tables -

A Table of the Distances of the Arches of the Signs upon the Hourlines of a Polar Dial, from the Equinoctial, for a Style divided into One Thousand Parts.

Angles of the Hour-lines, with the Meridian.

Parts of the Horizontal-line, comprehended between the Meridian and the Hour-lines.

Parts of the Hour-lines, comprehended between the Center of the Dial, and the Equinoctial.

Parts of the Equinoctial, between the Meridian and the Hour-lines.

Angles of the Hour-lines, with the Equator of the Triangle of Signs.

Angles of the Hour-lines, with the Meridian.

Parts of the Horizontal-line, comprehended between the Meridian and the Hour-lines.



Plate 15. NOCTUQUE DIUQUE

Parts of the Hour-lines, comprehended between the Center of the Dial, and the Equinoctial.

Parts of the Equinoctial, between the Meridian and the Hour-lines.

Angles of the Hour-lines, with the Equator of the Triangle of Signs.

Parts of the Hour-lines, between the Center of the Dial, and the Tropick of *B*.

Parts of the Hour-lines, between the Center of the Dial, and the Tropick of \mathfrak{D} .

FINIS.

Table of the TERMS

Explain'd in the GNOMONICS, OR DIALLING.