## SAMUEL FOSTER, ELLIPTICAL OR AZIMUTHAL HOROLOGIOGRAPHY <br> London 1654

## ELLIPTICAL, AZIMUTHAL Horologiography.

Comprehending feverall wayes of defcribing D $I A L S$ upon all kindes of Superficies cieher plain or curved: And unto upright Stiles in whatioevcr pofition they fhall be placed.

```
Invented and Demonftrated
By SAMUEL FOSTER, Late Profeffor of Aftronomic in Grefbam-Colledge.
```



- LONDON,

Printed by R. \& W. Le y b oun N , for Nicholas Bourn, at the South encrance into the Royall Exchange, $1654^{\circ}$.

ELLIPTICAL or AZIMUTHAL Horologiography" is a book containing the following:

S ECT. I.
Of the Elliptical Dial, where the Index stands perpendicular to the Plain: How to draw it for an Horizontal Plain, or any other Plain that declineth not.

S ECT. II.
How to frame the Elliptical Dial to other Plains which are not direct but declining : To an Index that standeth perpendicular to the plain.

S E C T. I I I.
Another way to prick down the Ellipsis upon an Horizontal Plain.
S E C T. I V.
Here follow some Uses and Varieties of this Ellipticall Diall.

S E C T. V.
Some varieties of the structure of it do here follow.


Circular Horologiography.
S ECT. VI.
AN ADVERTISEMENT Concerning some other uses of the Instrument that was last described.

S E C T. VII.

1. How to draw and divide the Ellipsis upon any Plain, to an Index that stands upright (not to the Plain, but) to the Zenith line of the place, or perpendicular to the plain of the Horizon.

SECT. VIII.
Hitherto of Ellipticall Dials to all Superficies whether plain or curved, whose Indexes stand upright in the Zenith line of the place: There now followeth some other directions how the same thing may be done to any Superfices, and to an Index set casually in any position whatsoever. But first are premised some usefull Propositions tending to the same purpose.

A briefe
DEMONSTRATION of the $7^{\text {th }}$. and $8^{\text {th }}$. Sections.

## FINIS.

## CIRCULAR

Horologiography.
How to make an Horizontall Diall in a Circle equally divided, to shew the Houre of the day, and the Azimuth of the Sun.
Another way to make the same Horizontall Diall equally divided, to finde the Houre and Azimuth.

How to make the like Houres and Azimuths


Rectilineal, or Diametral Horologiography.
by an equally divided Circle, upon all Plains whatsoever.

A briefe
DEMONSTRATION of these Circular wayes of making DiAls. A P P ENDIX. FINIS.
R E C TILINEAL OR
D I A M E T R A L Horologiography.

Concerning Dials made upon a finite streight line, with moveable Index.

## A

DEMONSTRATION
of the former way.
A P P E N D I X.

## For

D E M O N S TRATION of these things.

## ELLIPTICAL Horologiogrphy.

How to make an Elliptical Diall upon any Plain, to an Index perpendicular to the Plain.

A second way to make the Ellipsis and houres to a slope Index upon a plain: and without trouble of making that Table before mentioned.

## CORONIDIS LOCO:

I shall here further adde ;
How upon an Horizontal Plain, to describe an Ellipticall Diall to an Index lying aslope, and pointing into some assigned Longitude and Latitude.
Another way for the description of an Ellipticall Diall upon the Horizontall plain of 51 gr. 30 min . Latitude, whose Zodiac, and the motion of the Index is performed upon the houres of 7 in the morning, and of 5 in the afternoon, as the same houres are drawn upon the common Horizontall Diall.

A Note concerning the framing of Dials to finde the Azimuth.

A N

## INDEX

Of the Chief P A R T I C U L A R S:

OF the Elliptical Diall, with an Index perpendicular to the plain.

## FINIS.

Courteous Reader, be pleased to take notice of these Books following, which are very usefull and necessary for all Merchants, Tradesmen, Accomptants, they are sold by Nicholas Bourn at the South entrance of the Royall Exchange.


Elliptical Horologiography.

