

SILVANUS MORGAN, HOROLOGIAGRAPHIA OPTICA

London 1652

Horologiographia Optica
DIALLING
Vniverfall and Particular:
Speculative and Practicall.

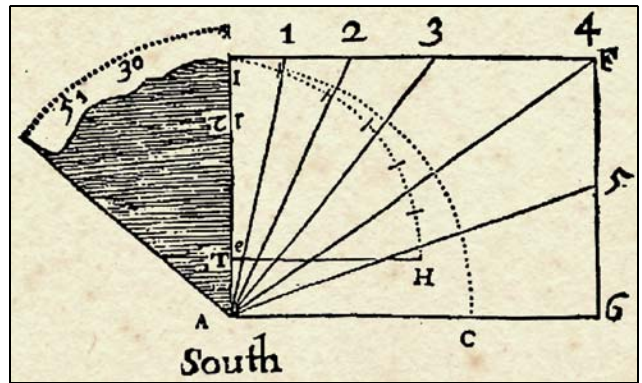
In a threefold PRÆCOGNITA, viz:
Geometricall, Philosophicall, and Astronomical: and
a threefold practife, viz. Arithmetically, Geometrically,
and Instrumentally. With diverse Propositions of the
use and benefit of shadows, serving to prick down
the Signs, Declination, and Azimuths, on
Sun-Dials, and diverse other
benefits.

Illustrated by diverse Optical Concepts, taken out
of *Augilinius, Kercherim, Clavius*, and others.
L A S T L Y,

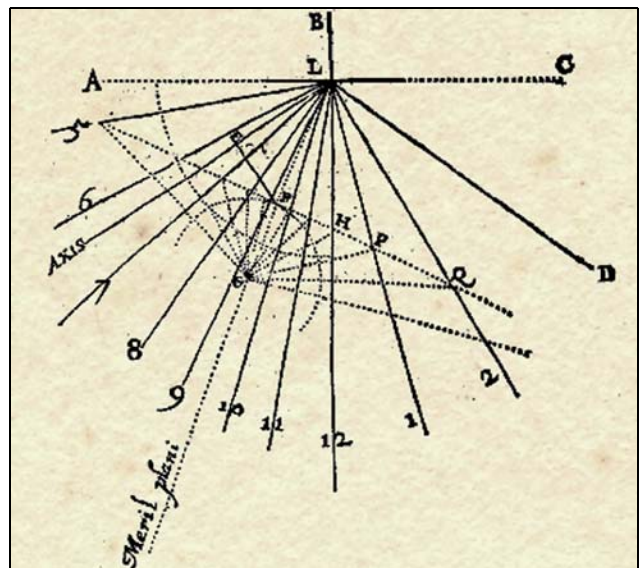
TOPOTHESIA,
O R,
A feigned description of the
COURT OF ART.
Full of benefit for the making of Dials, Use of the Globes,
Difference of Meridians, and most Propositions
of ASTRONOMIE.
*Together with many usefull Instruments and Dials in Brasse,
made by Walter Hayes, at the Croffe Daggers in More Fields.*

Written by Silvanus Morgan.

L O N D O N
Printed by R & W Leybourn, for Andrew Keme, and Robert Baydell's,
and are to be sold at St. Margarets Hill in Southwark,
and at the Bulwark near the Tower. 1652.



A Horizontal Dial for $51^{\circ} 30'$, London



A Vertical Declining Dial

“Horologiographia Optica. **DIALLING** Vniversal and Particular.” is a book about Geometry, Astronomy and Dialling.

THE PRÆCOGNITA GEOMETRICAL

THE PRÆCOGNITA PHILOSOPHICAL

THE PRÆCOGNITA ASTRONOMICAL HOROLOGIOGRAPHIA OPTICA

With 18 chapters on Dialling on 83 pages.

CHAP. I.

*Shewing the making of an Horizontall plane to
an Oblique Sphere.*

CHAP. II.

*Shewing the making of a direct Verticall Diall for an
Oblique Sphear, that is, a direct North or
South Diall plane.*

CHAP. III.

*Shewing the making of a direct North Verticall Diall for an
Oblique Sphear, as also a more easie way of drawing the
South or Horizontall Planes.*

CHAP. IV.

*Shewing the making of the Prime Vertical planes,
that is, a direct East or West Diall.*

CHAP. V.

*Shewing the making a direct parallel Polar plane,
or opposite Æquinocall.*

CHAP. VI.

*Shewing the making of a direct opposite polar plane,
or parallel Æquinocall Diall.*

CHAP. VII.

*Shewing the making of an erect Verticall
declining Diall.*

Number of Pages: 156, with 83 on Dialling

Illustrations: 33 on Dialling

CHAP. VIII.

Shewing the use of this Table both in Vertical and Horizontall planes.

CHAP. IX.

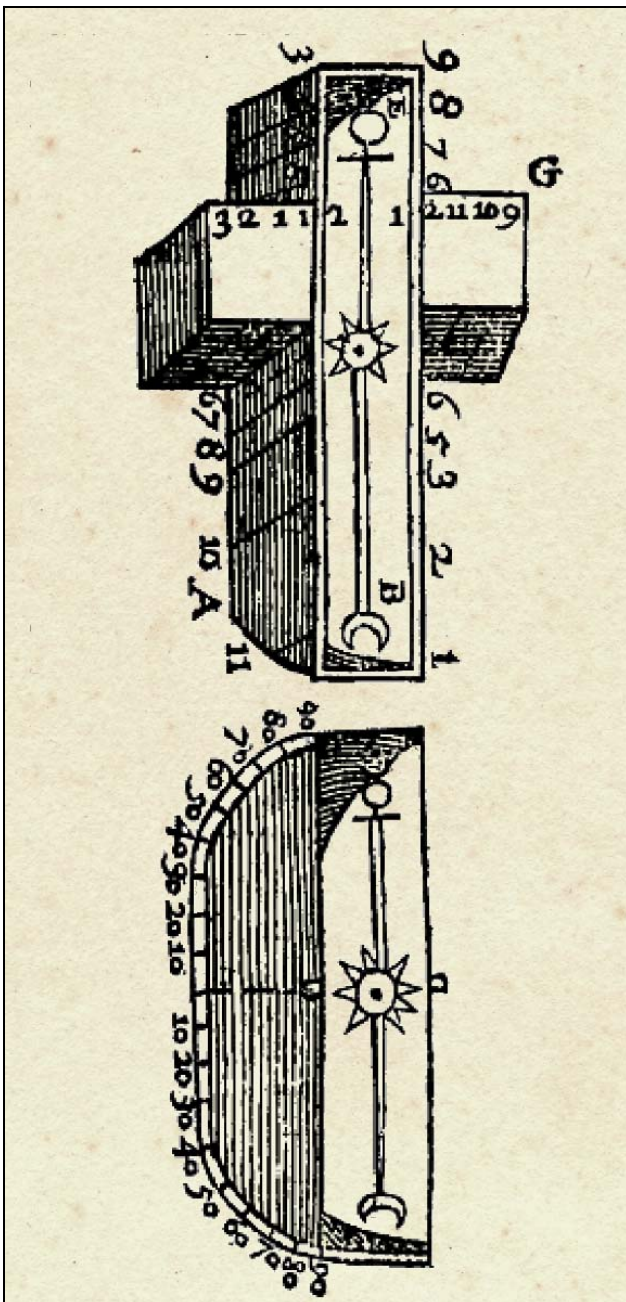
Shewing the use of the Tables in making any Declining or Inclining direct Dials.

CHAP. X.

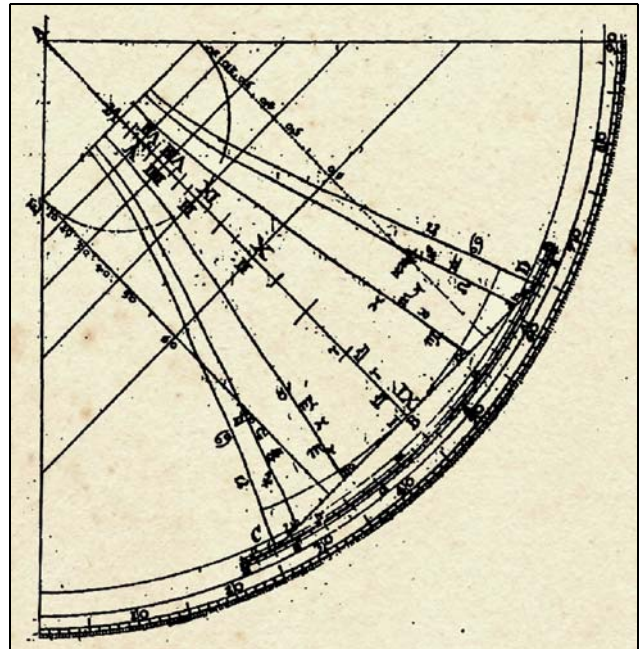
In which is shewed the drawing of the houre-lines in these last planes not there mentioned, being also part of Pitiscus his example in the fourth Probleme of his liber Gnom.

CHAP. XI.

Shewing how by the helpe of a Horizontall Diall, or other, to make any Diall in any position how ever.



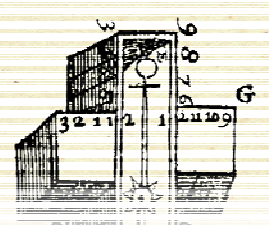
'Diall on a Crosse'



Direct east or West Dial

CHAP. XII.

Shewing the making of a Diall on a Crosse form, as also a Universall Quadrant drawn from the same projection, as also to describe the Tropicks on Meridian or Polar planes.



CHAP. XIII.

Of the generall description and use of the preceding Table in the pricking down and drawing the circles of declination and Aximuths in any planes.

CHAP. XIV.

Shewing the drawing of the Seeling Diall.

CHAP. X.

Shewing the making and use of the Cylinder Dial, whose hour-lines are straight, as also a Diall drawn from the same form, having no Style.

CHAP. XVI.

Shewing the making of a universall Dyall on a Globe, and how to cover it, if it be required.

CHAP. XVII.

Shewing the finding of the Elevation of the Pole, and therewithall a Meridian without the Declination of the Sun or Starre.

CHAP. XVIII.

Shewing how to finde the Altitude of the Sun, only by, Scale and Compasses.

TOPOTHESIA

OR

An IMAGINARY DESCRIPTION of the
COURT of ART.

FINIS.