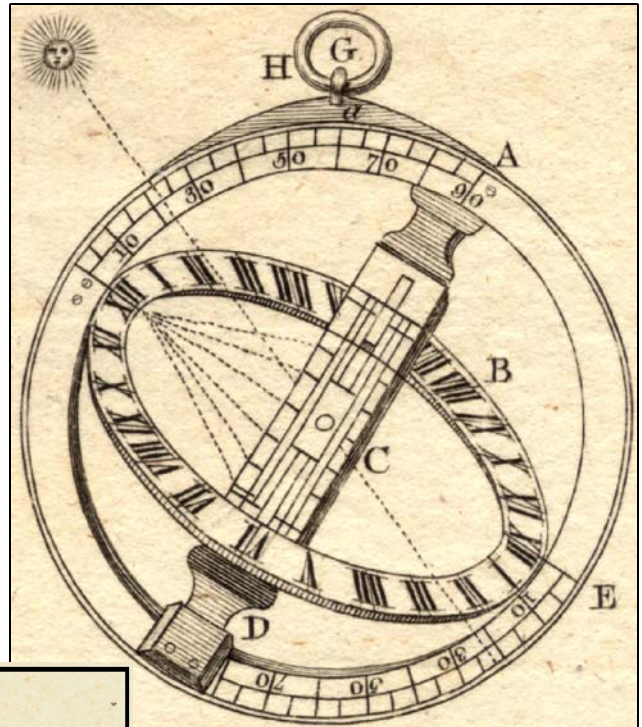


JOHN WORGAN, THE USE OF THE UNIVERSAL RING-DIAL

London 1696

“The USE of the **Universal Ring-Dial**” is a single page Leaflet explaining the use of such a dial. A copy of the Leaflet is placed below and a picture of such a dial from another publication.



The USE of the Universal Ring-Dial.

To find the hour of the Day.

Set the Stroke in the Sliding Piece to the Latitude of the Place, and set the Stroke crossing the little hole in the Bridge or Middle Piece, to the Day of the Month; then open the Rings, and hold them up by the Little Ring, and move the Bridge, or Middle Piece, so towards the Sun, according as you may think to be near the Hour, and move it gently this way and that, till the Sun shining thorow the little hole in the Bridge, you can discern a little Ray or Speck of Light, to fall upon the *Æquinoctial*, within side, among the Hours; and the Point in the Middle Line, whereon the Ray or Speck falleth, is the True Hour of the Day.

To find the Altitude of the Sun.

Set the Stroke in the Sliding Piece, to the beginning of Degrees, and put a Pin thorow the Hole on the Back-side of the Ring, and the Shadow of the Pin shall shew the Altitude on the Large Quadrant on the Back-side.

To find the Suns Declination.

Set the Stroke crossing the little hole in the Bridge, to the Day of the Month, and against it, on the other side, is the Sun's Declination.

To find the Latitude of the Place.

First find the Sun's Meridian, or greatest Altitude that Day observ'd; then find the Sun's Declination for that Day. If that you make your Observation in the Summer Half Year, viz, from the 10th of *March* to the 12th of *September*, then you must subtract the Declination from the Altitude; but if you observe in the Winter Half Year, viz, from the 12th of *September* to the 10th *March*, then you must add the Declination of the Altitude, and either of those Numbers is the Height of the *Æquinoctial*, which subtract from 90 degrees, is the Latitude of the Place.

This Instrument, or any other useful for the Mathematicks, are Made and Sold by Tho. Walpoole at the Sign of the Mariner and Compass in the Minories. 1696.