

length of a degree of its circumference is 364,578 English feet; or very nearly as many thousand feet as there are days in a year.

2d. Though *nearly*, the degrees are not *precisely* equal. In all geographical *longitudes* the degrees of latitude are found to increase in length in going from the equator towards the poles. An increase in the length of a degree indicates a less amount of curvature. The earth's surface is therefore less curved, or *less convex*—that is, flatter—as we approach its poles on all sides from the equator. Its form then is elliptical, or *oblate*, and its polar diameter somewhat shorter than its equatorial. From the most recent calculations (those of Captain Clarke, founded on a general assemblage of all the measured arcs) it results that the difference of these two diameters is one 292d part of the former.

3d. That the length of its polar diameter is 41,707,796 British imperial standard feet, which is within a single furlong of 500,500,000 such inches.

(14.) Hence it follows, that if we were to increase all our imperial standard measures, each *by one precise thousandth part*,\* and designate the measures so increased by the epithet *geometrical* instead of *imperial*, a geometrical inch would be the exact 500,000,000th part; a rod of fifty *such* inches the exact 10,000,000th part of the earth's polar axis; and one of twenty-five *such* (which might be called A GEOMETRICAL CUBIT) the 10,000,000th

\* I have before me for ordinary use two *foot rules*, both bought at respectable shops, and not the worse for wear, which differ by more than this amount.