

to the surface. As it is quite essential to the understanding of what follows that this, "the law of ordinary refraction," should be clearly apprehended, we will illustrate it by a figure. Let $A C B$ be a section of the surface

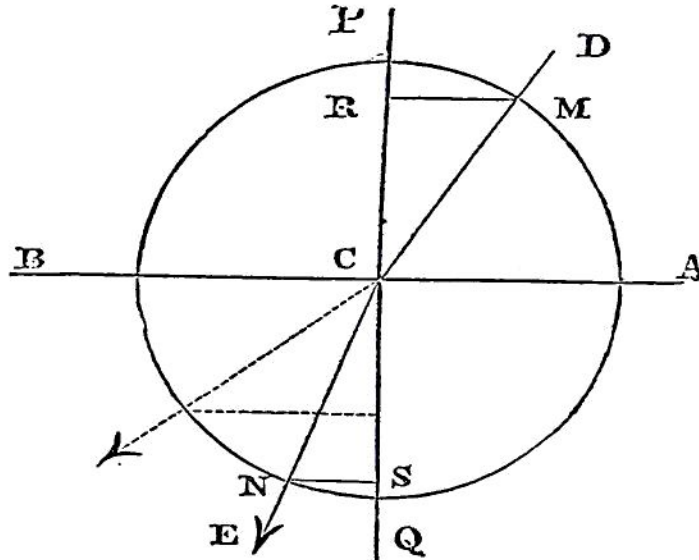


Fig. 1.

by the plane in which the ray $D C$, incident at C , and $P C Q$ the line perpendicular to the surface at C , both lie, and $C E$ the refracted ray. Taking C for a centre, with any radius, $C M$, describe a circle cutting the incident and refracted rays in M and N , from which points draw $M R$, $N S$ perpendicular to $P C Q$. Then will these two lines be to each other, in one and the same invariable proportion, whatever be the inclination of the original ray $D C$ to the surface, or to the perpendicular $C P$. This latter inclination is what is understood by the "angle of incidence," and the corresponding inclination (to the perpendicular $Q C P$) of the refracted ray, by "the angle of refraction."