and extends to all media, whatever their refractive powers. Thus, for water, the polarizing angle is 53° 11′, and for diamond 68° 6′—numbers concluded from this simple rule (equivalent to the geometrical property above

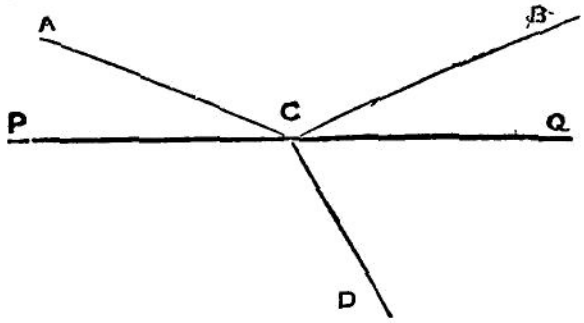

Fig. 13.

stated) that *the index of refraction is in all cases the tangent of the polarizing angle.*

(129.) If a ray of light so polarized by reflexion be received on such a prism as is above described, held with its refracting edge (*i.e.*, the optic axis of the crystal) at right angles to the plane of reflexion, or parallel to the reflecting surface, it will entirely pass into the ordinary, or most refracted image; *vice versâ*—if the prism be turned round 90°, so as to have its edge parallel to the plane of reflexion (*i.e.*, of polarization), wholly into the extraordinary. The same interchange will of course take place if the prism be held immovable, and the reflecting glass turned round, so as to change the plane of reflexion, and thus we perceive that rays *oppositely polarized* are distinguished by the characters of passing *entirely* into the one and entirely into the other of the two images, when so refracted. A beam of light partially polarized may be regarded as a mixture of two portions, the one wholly polarized, the other wholly unpolarized; and a