

referred to in what follows as a "polarizing frame," a similar series set transparently being termed a "polarizing pile."

(135.) *Other modes of polarization.*—There are certain doubly refractive crystals, more or less coloured, which possess the singular property of absorbing or stifling in their passage through them, *unequally*, the two oppositely polarized rays into which they divide the incident light. Two bodies especially have been noticed in an eminent degree endowed with this property—the one a mineral occurring more or less frequently among the rocks of igneous origin, called the tourmaline, the other an artificial chemical compound, the iodo-sulphate of quinine. The former crystallizes for the most part in long prisms of many sides, terminated by faces, three of which belong to the primitive form, an obtuse rhomboid, whose axis is that of the prism itself. In consequence, like all crystals of this class, it is doubly refractive, and if artificially cut and polished into a doubly refracting prism, having its refracting edge parallel to that of the rhomboid, an object viewed transversely through it will appear double; provided the eye be held quite close to the refracting edge; but if ever so little removed, so as to look through a greater thickness of the substance, one of the images will be observed to diminish rapidly in intensity; and at a certain, usually very moderate, thickness to disappear altogether, as if extinguished by a deeper colour or a higher degree of opacity in the medium, the other remaining undiminished. The unextinguished ray is, of course, completely polarized, and