not familiar with some of the most intricate departments of mathematical science. In explaining such features (when unavoidable), without prejudice to the strictness of mathematical reasoning adducible and held to be conclusive and satisfactory by those who have mastered it, we must have recourse to analogies more or less close with processes we see going on in nature; and which, whether perfectly understood or not in their *modus operandi*, we, at all events, perceive to consist in a sequence of events, comprehensible in themselves and arising naturally and familiarly one out of another. There are many phænomena of polarized light which admit of being so, as it were, shadowed forth to the mind of a beginner as analogous to things familiar enough. In such cases, though the analogy may be imperfect, or even altogether incompetent to stand for an explanation, the phænomenon is sometimes so neatly conveyed to the intellect, that by generalizing to the extreme all the terms used in describing the one, it is very conceivable that the cardinal feature of the other—that which dominates its whole explanation—*may* be included. Even if not so, the object is so far answered, that the student remains possessed of a mental picture which will not allow him to forget its prototype. And it is not a compendium of Optics, or an essay on Vision, or an account of telescopes, microscopes, or other optical instruments, that he has here to expect. Nothing of the kind could by possibility be comprised within such limits as a contributor to a work of this kind must necessarily observe. Suffice it to convey to his apprehension some