

CHAPTER XVII.

The Ether.

IN what has just been said, we have spoken of light, only with respect to its power of illuminating objects, and conveying the impression of them to the eye. It possesses, however, beyond all doubt, many other qualities. Light is intimately connected with heat, as we see in the case of the sun and of flame; yet it is clear that light and heat are not identical. Light is evidently connected too with electricity and galvanism; and perhaps, through these, with magnetism: it is, as has already been mentioned, indispensably necessary to the healthy discharge of the functions of vegetable life; without it plants cannot duly exercise their vital powers: it manifests also chemical action in various ways.

The luminiferous *ether* then, if we so call the medium in which light is propagated, must possess many other properties besides those mechanical ones on which the illuminating power depends. It must not be merely like a fluid poured into the vacant spaces and interstices of the material world, and exercising no action on objects; it must affect the physical, chemical and vital powers of what it touches. It must be a great and active agent in the work of the universe, as well as an active reporter of what is done by other agents. It must possess a number of complex and refined contrivances and adjustments which we cannot analyze, bearing upon plants and chemical compounds, and the imponderable agents; as well as those laws which we conceive that we have analyzed, by which it is the vehicle of illumination and vision.