

## CHAPTER V

## PHENOMENA DEPENDANT ON THE DISTRIBUTION AND CONDITIONS OF LIGHT.

IN this chapter we shall endeavour to give a general description of the most remarkable terrestrial phenomena which result from the conditions of light, and to explain the laws by which they are governed. It is not our intention to make any extended remarks on the opinions which have been entertained concerning the nature of light as a physical agent, a subject which has always been involved in doubt, or rather in inexplicable mystery; nor can we refer minutely to those physico-mathematical laws which govern its intensity, distribution, and colour, though it will be necessary to refer to some of these for the explanation of the phenomena that properly come under consideration. We will admit the existence of a principle called light, and that the organ it is adapted to affect is the most extensive and accurate of all the mediums of sense, the best calculated to add to our pleasures, and to increase our intellectual resources. From these admitted facts we will endeavour to trace the peculiarities which, under various circumstances, produce the different luminous appearances around and above us. Indeed, no science is more worthy of investigation than the science of optics, although it is generally less understood than many others. By a knowledge of the properties of light, man has received a marvellous increase to the extent of his vision;—things too distant or too near for the natural range of his sight, are brought within the compass of his observation by a mechanical application of this science; and, in a limited acceptation, he possesses the power of giving sight to the blind, by relieving the misfortunes of some, and the infirmities of others.

## PRODUCTION OF LIGHT.

Light is produced under various circumstances, and by means which we cannot very readily explain. It has been