of water; which two volumes of water, according to our hypothesis, must consist of twice the number of self-repulsive molecules contained in the one volume of oxygen; yet every one of these molecules must contain oxygen; because oxygen is an essential element of water: it follows, therefore, irresistibly, that every self-repulsive molecule of oxygen, *has been divided into two;* and consequently, must have originally consisted, of at least two elementary molecules; somehow or other associated, so as to have formed only one self-repulsive molecule. This conclusion, which seems to flow inevitably from our premises, is most important, as we shall see immediately; and enables us to throw no small light upon many points deemed obscure. In the mean time, let us consider briefly the nature of the compound self-repulsive molecule of oxygen.

We endeavoured to show in the previous chapter, that every ultimate molecule of matter must possess two kinds of polarity; which, for want of better terms, we denominated the *chemical*, and the *cohesive;* and that these polarities bear the same relations to each other, as electricity and magnetism; in other words, that, like these forces, the chemical and cohesive polarities, exist at right angles to each other. Hence if A, and B, be supposed to be two molecules of oxygen, of which E*e*, E*e* represent the