of the gas employed remains the same at the end of the experiment that it was at the beginning provided it be brought to the same degree of temperature and atmospherical pressure, it appears that the carbon is as it were held in solution by the gas: and as this chemical compound of carbon and oxygen possesses acid properties, it is called *carbonic acid gas*.

A volume of this gas, then, which weighs one hundred grains, consists of twenty-eight grains of carbon chemically combined with seventy-two grains of oxygen: and it has certain properties, by which, without the labour of actual analysis, it may be recognised from any other gas; among the more important of which, for our present purpose at least, is the readiness with which it communicates a wheyish appearance to lime-water, when made to pass through that liquid. Making use of this character as a test, any individual may easily satisfy himself that during the process of respiration a quantity of carbonic acid gas passes from his lungs: for if, after having inhaled a portion of atmospherical air uncontaminated with any mixture of it, he breathe slowly through a narrow tube, the further extremity of which is immersed beneath the surface of a portion of lime-water, he will observe that as the bubbles of air rise through the lime-water, that liquid becomes