

But what is Nitrogen? A simple body, colorless, tasteless, in odorous, as the chemical text books tell us. And they used also to say that it was always gaseous when uncombined. So it is at ordinary temperatures, but it can be frozen at 346° below zero Fahrenheit when under enormous pressure. Then it becomes, according to Professor Dewar, a white crystalline substance. His apparatus for producing it cost something like £5000 and cannot very well be reproduced here. But although we cannot have the solid nitrogen we have plenty of the gas. When the ladies use their fans it is mainly to put nitrogen in motion. It is the sleeping partner of oxygen in carrying on the business of the atmosphere. It is a mysterious element, fickle, indifferent and unstable, but it is most abundant and constitutes four-fifths of the ocean of air at the bottom of which we live, move and have our being. The experiment which demonstrates this is very old, but like a good story is none the worse of being twice repeated.

All the interesting positive properties of the atmosphere are due to oxygen. Nitrogen is only present as a diluent, a restraint, a drag. It is mixed with the oxygen in a mechanical sort of way to prevent its doing too much damage, like water in whiskey. There is no intimate chemical combination betwixt the gases of the atmosphere. In fact nitrogen does not combine willingly with the other elements and is always ready to part company with them at very short notice.

The question "What is nitrogen?" can, however, be asked and answered with the same significance as the enquiry "What is butter to-day?" when asked by purchasers at the market. Nitrogen has its price like butter, and in fact the latter is sometimes sold at no higher price per pound. Here we have three jars containing respectively dried blood, sulphate of ammonia, nitrate of soda; all articles of commerce and used in Canada chiefly as fertilisers. All contain nitrogen, although in different combinations, and in all of them the nitrogen is worth about 16 cents per pound. Inside of these bottles then its value is considerable; outside of them, in the atmosphere, it is valueless. Inside the bottles it is combined, outside it is free; free as air and as cheap. But just fancy how rich we should all be if this free nitrogen could be fixed and realized in the form of money. Fifteen pounds of air press upon