16th on the 17th, and from that of the 19th on the 20th February. The first two were perfectly clear, the last had a peculiar slight opalescence. The composition of the gases extracted from them is remarkable.

TABLE VII.—*Composition of Air dissolved in Rain Water.*

Date, February 1875.		15th.	16th.	19th.
Carbonic acid,	c.c. per litre	1·84	1·22	3·95
Oxygen,	,,	2·47	3·91	0·06
Oxygen and carbonic acid,	,,	4·31	5·13	4·01
Nitrogen,	,,	10·83	11·70	11·65
Total gas,	,,	15·14	16·83	15·66
Oxygen in gas freed from carbonic acid,	per cent.	18·56	25·42	0·52
Carbonic acid,	,,	12·15	7·26	25·21
Oxygen,	,,	16·31	23·24	0·40
Carbonic acid and oxygen,	,,	28·45	30·50	25·61
Nitrogen,	,,	71·55	69·50	74·39
		100·00	100·00	100·00
Nitrogen theoretical (assumed value),	per cent.	66·40	66·40	66·40
Oxygen and carbonic acid found,	,,	26·40	29·14	22·86
Deficiency,	,,	7·20	4·46	10·74
		100·00	100·00	100·00

When allowance is made for the moisture in the air and the low barometric pressure of equatorial regions, the theoretical amount of nitrogen which should have been dissolved in the water would be 11·6 c.c. The waters of the 16th and 19th agree closely with the theory, that of the 15th contains less nitrogen than would be expected.