

THE SANITARY JOURNAL.

DEVOTED TO
PUBLIC HEALTH.

VOL. IV.] JANUARY AND FEBRUARY, 1880. [No. 3.

PRACTICAL HYGIENE.

THIRD PAPER.

AIR IN ITS RELATIONS TO HEALTH.

SECTION IV.

AIR VITIATED BY SEWAGE AND OTHER EXCREMENTAL MATTERS.

THE EFFLUVIA FROM SEWERS, PRIVY VAULTS, CESS-POOLS, and all accumulations of excremental or other decomposing organic matters, consist of a number of gasses and vapors, amongst which are carbonic acid, sulphuretted and light carburetted hydrogen, nitrogen ammonium sulphide, and foetid organic vapors. The organic vapors are usually in large proportion. The amount of gasses and vapors, and the proportion of these to each other, emanating from sewage, must vary greatly, according to the degree of dilution of the sewage, its temperature, the rapidity of its outflow, and, especially, the ventilation of the sewers; and again, according to what passes into them—whether only or chiefly human excrement, or also the washings of the streets, the refuse of certain trades, &c. It appears from analyses made by various experimenters, that oxygen is diminished, and carbonic acid is greatly increased, and that sulphuretted hydrogen and ammonium sulphide exist only in minute quantities.

From Dr. Letheby's experiments it appears that sewage, containing 128.8 grs. of organic matter per gallon, and excluded from air, gave out, during a period of nine weeks, 1.2 cubic inches of gas per gallon per hour. The gas consisted of 73.833 per cent. of