

Editorial Notes

AIR POLLUTION

More attention should be given to preventing air pollution by smoke, dust, and other impurities. Health authorities have been lavish in preventing pollution of drinking waters and foods, though these are moderately consumed compared with the air breathed.

Heretofore the whole science of ventilation has been based upon a fallacy. It is now very well known that carbon dioxide gas is only harmful when present in proportion approaching that in expired air.

All air-borne diseases are now recognized as transmitted by solid particles in suspension in the air, not by the means of a poisonous gas. It is evidently useless, therefore, to measure the proportion of CO_2 in the air in a building to determine the fitness of the air for breathing. It is upon the absence of dust, the real source of danger, the statements should be based as to the real purity of the air.

There is another point to be considered. When, for example, a person breathes in air laden with germs, such as those of consumption, whether he contracts the disease depends upon two factors: (a) the dose, and perhaps the virulence of the disease-carrying microbe which he receives; and (b) his own resisting power to infection.

While there are now several systems of ventilation which attempt to filter air entering a building, there is nothing to measure the purifying effects of such methods. If the screens or filters collect a good deposit of dirt, that may be satisfactory. But there are no ordinary means of distinguishing between harmless dust and dust carrying disease germs, outside of bacteriology.

Since 1911 efforts have been made in England to standardize methods of measuring atmospheric pollution by suspended matter. The objects in view were: (a) to measure quantitatively the amount of matter deposited from the air at any place during a fixed period; (b) to measure the amount of matter held in suspension in the air at any time and place; and (c) to find the nature and composition of deposited and suspended matter.

The various methods are the filtration method, the method adopted as the standard, Aitken's dust counter, the method of Professor Cohen, of Leeds, the glass plate method, filter paper.