

ammonia in small quantities, are from much the same source as the carbonic acid. Our breath contains comparatively large quantities. Air fouled by the gases produced by decay, by sewage emanations, by contact with fifth of all kinds, is loaded with organic matter, largely in the form of noxious gases, which may contain disease germs, but which, at all events, is extremely detrimental to health.

The unpleasant odour, and sometimes even taste, experienced on entering crowded and heated rooms, is due to organic matter in the atmosphere. The pleasurable sense of relief on going out into the fresh air from a room, is a sure indication that its air is seriously contaminated with organic matter. We should take care that we do not habituate ourselves to unpleasant odours of this kind. The constant smell of food in the house should be avoided, or rather prevented. Dust should not be allowed to accumulate in carpets; worn clothing should be thoroughly aired before putting away, and above all, defective drainage should at once be made perfect.

AIR VITIATED BY RESPIRATION.

Let us now briefly recapitulate those points, in which expired air differs from that of the atmosphere.

1. Its oxygen is largely reduced. By respiration between 4.5% and 5.0% of oxygen is removed for the combustion of the food material in the blood.

2. It contains a considerable amount of organic matter of a particularly deleterious character. From the lungs alone about 3 grains are thrown off daily, and to this must be added the variable amount from the exhalations of the skin.

3. The carbonic acid is largely increased. While fresh air contains about 4 volumes of carbonic acid per 10,000, expired air contains between 400 and 450 volumes in the same quantity. This tremendous increase is easily understood when we remember that the individual breathes about 18 times per minute, and at each respiration produces nearly $1\frac{1}{3}$ cubic inches of carbonic acid. This amounts to $\frac{2}{3}$ cubic feet per hour, or at least 16 cubic feet in the 24 hours—a quantity equal to that produced by the burning of $7\frac{1}{2}$ oz. to 8 oz. of carbon.

4. The amount of aqueous vapor is augmented, for, as we have