

age, they neglect exercise in the open air, and *their mental labor is severe, and worry of mind exhausting.* Of eleven teachers who died during the last eight years within the limits of one county in Pennsylvania, two died of acute disease, one of an overdose of an habitual narcotic, and of nine attacked by consumption, eight died—six ladies and one gentleman; the other a gentleman, will recover, at least for a time.

The organic matters suspended in the air are derived (a) from the body; (b) from other sources. Epithelial cells or scales, very minute, arise by desquamation from the external cutaneous surface, and also from the mouth, pharynx and bronchi. Being exceedingly light, they float in the air and are inhaled, lodging in the throat, trachea and even deep in the lungs. It is not pleasant to contemplate the fact that we inhale minute portions of each other's bodies, but it is true nevertheless. In diphtheria, scarlatina, smallpox, measles, etc., these epithelial scales come off in vastly greater quantities than in health, carrying with them, in greater or less virulence, the peculiar infection in the body whence they have arisen. The greater their number and the more favorable the nidus in which they become deposited, the more likely they are to become transplanted as primary centres of infection. Hence it is important to prevent their *accumulation*, as the greater their numbers the greater the probability of their successful transplantation; and as they float in the air they follow its currents and are thus removed by ventilation. Other sources of organic matter are various and numerous, but, with the following exception, of little importance in the present connection.

The cutaneous surface and the lungs give out certain odors, *sui generis*, which are designated "animal exhalations." It is to these that the heavy, sickening smell noticed on first enter-

ing a crowded room is due. Odors being volatile and exceedingly light, these exhalations rise to the highest portions of the room; and, if not allowed to escape, accumulate there, saturating the air from above downward, and finally reaching the floor. Of all the noxious matters in the fouled air of a poorly ventilated school or public building, these are at once the most perceptible, the most offensive, and the most rapidly prostrating. They produce a sensation of stifling by their irritation of the branches of the pneumogastric nerve distributed to the lungs and larynx, and nauseate, probably by reflex action, through branches of the same nerve distributed to the stomach. A distinguished physician, writing of an infant nursery under his charge where the children did not thrive, and many died of diseases of the digestive organs, says: "One remarkable circumstance observed was that there was a faint odor always present in the room. Yet it was a large room, about fifty feet in length. One side of the room was made up of windows which went up about ten feet where the roof or ceiling beveled up in an inverted  $\wedge$  shape, which raised the room in the centre seven or eight feet more. Do what I would, I could not get rid of this smell. One day, being much annoyed thereat, I procured some long steps which extended about three feet above the upper ledge of the windows. On walking up, no sooner had I got my head one foot above their level, than I found a terrible odor that made me feel giddy and sick, and I was glad enough to come down. I instantly sent for a workman and desired him to remove three or four tiles at each end of the room, on a level with the highest point of the roof. He did so. In ten minutes all odor had disappeared; but his work was no sooner ended than he was taken very giddy and practically sick, so completely had he been overcome by the pestilential atmosphere."