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## VARIOUS SMELLS AND MICRO-ORGANISMS: BY ALFRED CARPENTER. M.D., J.P. & C.

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THE peripatetic world is now and then convulsed by agitations against the smells which come from openings into sewers. "Shut them up," say the most energetic and demonstrative. Sometimes this is effected, sometimes it is not. In the heated discussions which spring up in consequence of some stinking outlet argument is useless. The loudest exclaimers often gain the day rather by the loudness of their declamation than by the correctness of their reasons.

I propose to consider the question in its bearing upon the public health in a scientific rather than in a partisan spirit.

The reasons for objecting to smells from sewers are sound enough. It has been proved *usque ad nauseam* that sewer smells do promote sickness. It is reasonable, therefore, that those who object to pay an unnecessary doctor's bill, and at the same time incur the risk of losing one of their beloved ones, should be loud in their antagonism to smells from ventilating gratings.

The first point to be determined is the actual nature of the smells, and (secondly) the causes which produce them. There are various kinds of smells, some pleasant, others objectionable, and some decidedly obnoxious, while there is a class which is utterly offensive . . . Smells arise from chemical changes in structures of the bodies engaged, which give off minute particles of matter, usually of an ethereal or gaseous character; and being so, are endowed with the attributes which belong to gases, each atom having a repulsive action toward every one of its own kind. . .

Some individuals smell very disagreeably but the mere smell is not capable of reproducing its kind any more than those from flowers and chemical decompositions, and are not, therefore, disease-producing. They cannot set up disease in other people. The odors from recently-discharged excreta are allied to this class. They are gaseous, have a tendency to diffuse themselves into space, are rapidly oxidized, and are not in any way Phoenix-like—that is, do not grow another generation of a similar kind. It is true that there are individuals with peculiar idiosyncrasies (as they are called) who cannot bear the smell of musk, or other penetrating odors. . . . But these are not cases in point. Stinks of this character may seriously effect a person but there is *no reproductive power in the smell*.

It is this point upon which I wish particularly to dwell, so as to bring before you the true facts and the real nature of so-called sewer gas. The smell of a water closet which has been recently used is very objectionable, but there is no probability of mischief to the next user on that account. It is no more injurious than is rose-water or the kennel of a fox. Fortunately for humanity that it is so. The odors from recent excreta are like to musk: they are ethereal, and tend to diffuse themselves, and so to become oxidized, and are rapidly destroyed. The excreta from a cholera or fever patient at its immediate discharge is perfectly harmless, but it is highly charged with ova, or germs of organic living matter, which are not so harmless. They are not volatile or diffusible, like to the ethereal smells of musk or of the fox.