

line of inquiry to pursue, to point out the changes which have been made in the personal habits of the people, and to trace the effect of such changes in the resulting health. Changes have been made in the way of warming and ventilating houses, both in town and country. Change in industries, in the style of living, in the habits as to hours, and in many other ways, all of which might produce that peculiar cachexia which is now called by our physicians and people "malaria." This word has been mentioned as a substantive name of a disease in every paper read before this assembly. A resemblance may be traced in the disease thus named, and an attempted description of real malaria, which will be given further on in this paper; but whether they both depend upon malaria, or bad air, is the point to be determined. It cannot be expected to determine such a point in a paper like this, except by inference. The object here now is to point out where contaminated air may reasonably be expected, and to classify the causes of its contamination. The theories concerning the essence or active principle of malaria are too well known to be recited, and therefore its supposed chemistry or composition will not be discussed. With each one of the sources of malaria, as they are mentioned in this paper, so far as it is possible, some remedial means intended for general or popular use will be suggested.

The malaria found in houses, both in public buildings and in private dwellings, large and small, called more properly contaminated house-air, and which shows its effects in domestic life, has many sources. In this city the most serious source is from the cess-pools, but this will be mentioned separately. * * * Wet, damp and unclean cellars produce indoor malaria, which permeates most dangerously the entire house. Building houses upon

bad ground is another source of malaria within doors, and want of house cleanliness is another. These will all be remedied, one after another, as the bad effects from them are practically demonstrated to the inhabitants; but it is particularly necessary to mention them, in order to keep their importance before the people.

The malaria which is found, and has its origin outside of dwellings, may be divided into that which is peculiar to cities and large towns, and that which spreads over wider districts. The atmosphere of a city is more readily contaminated than the same area of country land, because the walls and yard enclosures prevent the air from moving through a city with the same freedom of natural currents which it does in the country; when air is partially stagnated it may be more easily contaminated. The air of a city is deteriorated by the radiation of heat from walls and pavements in summer, and is contaminated from the exhalations from gutters, butcheries and refuse manufacturing products at all times. The air of this city in particular is further contaminated by the exhalations from the earth itself, which holds gases of many kinds in its pores, and is constantly exhaling them into the air which we breath; particularly is this the case in summer, and more particularly when the earth is dug up in large areas in warm weather. Dr. McShane, of this city, has particularly studied this point, and will give some of his conclusions to the convention. The negligent fitting of gas pipes, permitting leaks, so saturates the earth in many places with burning gas, that some of the finest trees have been killed. All these are undoubtedly sources of malaria. Can they be remedied? Hard as the problem may seem, it would be by no means impossible, provided our citizens would lend a more determined hand in the matter.