

## "ON DRAINAGE."

It is a well-established fact, that the principal cause of fever is a humid, miasmatic state of the atmosphere, produced by the presence of an excess of moisture on the ground, from which poisonous exhalations constantly arise, and carrying into the system of those who inhale it a virus which, if not sufficiently intense to produce fever, has such a disturbing effect upon the functions of some organs as to weaken the general system and act as a powerful predisposing cause of some of the most common and fatal maladies to which the human body is subject.

It follows as a matter of course, that the first effort to improve the salubrity of any place whatever should be directed toward preventing the aggregations of water in particular localities, and to remove such as have been allowed to collect.

As the sanitary condition of any city or district of country is so intimately connected with its proper drainage, and the latter is so dependent upon and governed by the topography of the locality, it would appear requisite that any inquiry into the causes or remedies for sanitary evils existing in the city of New York should be based upon a thorough knowledge of the topography of the island upon which it is built; and I have no hesitation in expressing the opinion that one of the chief causes of mortality is to be found in the defective drainage of certain districts of the city; and furthermore, that this is an evil which is increasing as the city extends itself towards the northern portion of the island, and that the main elements by which the evil is increased are the so-called city improvements, or grading of streets and avenues, which are now being carried forward.

The consequence is an accumulation in different localities of deposits of stagnant water, which in itself is not only detrimental to health and productive of epidemics, but by reason of accumulation it causes the saturation of an extensive area of ground, permanently unfitting it for building sites, since no house can be located within this area of saturation without being affected by dampness to a greater or less extent.

The result is that any change of temperature in the apartments of these houses must produce a condensation of the moisture which is ever present in these apartments by presence of capillary attraction, which has caused it to ascend from the saturated earth on which the house is built. The very heat with which the occupants of houses so situated seek to draw off this dampness only aids in the end the capillary force which is always at work. As a result of this disregard of nature's simplest laws, and under a criminal combination of ignorance and neglect, we have constantly present the various forms of intermittent and typhoid fevers, consumption, scrofula, and all the diseases

attendant on the atmospheric conditions which are due to this source. — GEN. VIELE ON DEFECTIVE DRAINAGE, *The Sanitarian for March*.

## ATOMISED INHALATIONS.

The Paris Academy of Medicine has had a discussion respecting the therapeutic value of inhalations of atomized fluids, or sprays that deserves attention. The debate originated in a report on the mineral waters and baths of France presented by M. Bourdon. In France several of the mineral waters are used not only for baths and drinking, but for application to the respiratory mucous membrane as sprays. It may indeed be said that it was in these establishments that the use of sprays first found favor. Rooms are fitted up for the purpose, and filled with the atomised mineral water, the use of small apparatus being in reality a substitute for such rooms. We are, however, disposed to think that the use of the small apparatus is in many cases preferable to a resort to the establishments. It will be seen that it is to the latter the discussion at the Academy chiefly related.

M. Bourdon mentioned that atomised waters were used by Fontan at Luchon more than thirty years ago, and ten or twelve years ago the therapeutic uses of Luchon water, in the form of spray, were brought under the notice of the Academy. It was shown that the spray really penetrated by various experiments on animals, and on a woman whose trachea had been opened; but it has been contended that the composition of the liquids is changed, and no doubt gaseous constituents are decreased or lost.

From the debate that ensued, it is clear there is great divergence of opinion in France as to the therapeutic value of sprays. Trousseau approved of them, as did others, and as do now Professors Gubler, Demarquay, Giralles, and others. M. Ridoux, who is inspector at Eaux-Bonnes, says he has only used sprays for the fauces and first portion of the larynx. In pulmonary diseases he finds they fatigue the patients too much. He says in experiments on animals the liquid penetrates the trachea and bronchi because it is injected with force; but in human beings, in ordinary conditions, he does not believe the spray enters the deeper parts of the respiratory passages to such an extent as to be useful. He therefore does not attach much importance to spray in diseases of the lungs, and in this he was supported by MM. Durand-Fardel, Jules Guerin, and Colin. These authorities, however, distinctly admitted the value of sprays in diseases of the throat and though they doubted their penetration far into the bronchi, acknowledged they had been proved to enter the larynx.

We think that English therapeutists will generally adopt a similar view. In diseases of the