

widely entertained whether these diseases, or some of them, can possibly attain very *general* prevalence in a town except where the faulty water supply develops them.'

It is now generally believed that all supplies of water are from the rainfall; a portion of the rain percolating the earth and forming subterranean stores. Rain water, when collected in the open country, or even in cities, after rain has fallen for a little time and purified the air, is the purest water that Nature supplies.

Water does not in itself change in character, but being a powerful solvent, it is rendered noxious as it dissolves, and becomes the vehicle of, poisonous matters. These consist for the most part of excrement and refuse from the habitations and works of men, which it meets with as it washes over or traverses the earth. In cities more attention is now being given to the necessity of providing a pure water supply. But in the smaller towns, villages, and even isolated farm dwellings, little or no care is taken with this view; wells are sunk utterly regardless of locality, further than concerns *quantity* of water and convenience to dwellings. And there can be no doubt that in all these much ill health arises from the use of impure water.

The quantity of water in the earth, depends largely upon the physical outline and geological character of the district. In some strata the amount will be proportionate to the volume or thickness of the beds; others will hold indefinite quantities proportionate to the number and size of the crevices and fissures which traverse them. Water so held will not pass indifferently in any direction, but must flow in the irregular channels presented by these crevices and fissures. Water held in store in the earth does not, as a rule, maintain a horizontal level, but its surface presents considerable fall at certain points corresponding to points of discharge of springs.

As stated by Baldwin Latham, C. E., F. C. S., &c., last year at the meeting of the British Association—'The fall of the water line having been established, it is not difficult to perceive that, where a considerable difference in surface level of subterranean water is discernible, this water must be moving in the direction of its outfall or natural vent. Water level, therefore, in subterranean strata, means the line drawn from the highest point at which it accumulates to the lowest point, or point of vent. Most geological strata, in a natural state, may be considered to be full to the level of the sea; beyond this there is an extensive store of water above this level rising in many districts to a considerable altitude. The inclined surface of this water is the measure of resistance to the movement of the water in its passage, or in other words, it is the measure of the element of friction and molecular attraction which interferes with the free discharge of the water, so that the water is retained in its subterranean reservoirs and but slowly delivered from them, the rapidity of the discharge of this underground water depending on the porosity of the strata, and the size and extent of the ducts which convey it to its natural point of outfall.'