

land is placed objects, and this necessary work cannot be gone on with. Undoubtedly, in many cases great hardships result from the selection of a site, because, as a general rule, the part which is chosen for any one of these sanitary purposes is not infrequently the most convenient for the others. Depreciation of surrounding property in most cases results from the concentration of such works in any one particular district, and, unless some one entirely outside local prejudice decides the question, the best scheme infrequently gives place to another whose only claim is that it has roused less opposition.

By another year I hope to present for your consideration a report in detail of these important matters. As it is mainly by the agency of water that such preventable diseases as enteric fever are conveyed, it is of the utmost importance that all water-supplies should be, like Cæsar's wife, "above suspicion." The permissive nature of past health laws is in the main responsible for the want of progress seen in some parts of the colony. Coupled to this is the apathy of the general public in respect to matters of sanitation. To have laid down a tramway during his reign or donated a park to the public are claims for enrolment in the niche of fame which the civic magnate knows can be seen of all men; and the Fathers of the City are unfortunately, in some instances, not immune from that frailty which requires the ordinary man to avoid hiding his light beneath a bushel. As our King recently said, "To the man who discovers the cause and cure of cancer a statue ought to be erected in every capital in the world," so to the councillor who turns the flank of diseases such as diphtheria and enteric fever assuredly will honour come.

During the short course of our existence we have spent a great deal of our time in advising and helping local authorities in respect to these matters.

Although the remarks upon the drainage of the larger cities are few and brief, the inspection and inquiry was not of that nature. Only the main features have been dealt with, and of necessity those points wherein the city failed have been noted in preference to those which claimed praise. Thus, in a certain way, the whole picture of the colony may appear blacker than it is, but with this caveat in mind no real injustice can result.

*Auckland.*—Here, as in some other respects, this, the most beautiful city in the colony, occupies an unenviable first place. Main sewers emptying themselves in the centre of inhabited areas, and sewage deposits forming an odoriferous fringe along its foreshore, and all this in the face of constant and vigorous complaints both from the people and the Press. It is the same old story—Auckland is trying to be comfortable in a garment which barely fitted her when she was half her present size. As with the water-supply so with the sewage—a complete and satisfactory system ought at once to be undertaken. Never until this is done will enteric fever cease to figure as largely in their hospital and death returns as it does at present.

*Wellington.*—Previous to the completion of the present sewerage system, enteric fever used to occupy a not insignificant position, both in the hospital records as well as the death-rate. At the present time, even although the house-connections are far from complete, this disease, which is one of the best barometers—so to speak—as to the sanitary condition of a community, has in a great measure disappeared.

*Christchurch.*—The sewage, along with the storm-water, is led to a pumping-station situated some distance from the town, where it is treated in a manner as nearly approaching the "bacteria bed" system as exists in the colony. There are several settling-ponds, or, rather, natural hollows which act as such, and the effluent is allowed to irrigate the various paddocks of the sewage farm.

I went over the whole system. Although the day on which I inspected the settling-ponds and farm was a very hot one, there was not the slightest smell or nuisance. The beneficent action of the saphrophytic organisms was well illustrated. Large portions of faecal matter, which had sunk to the bottom of the pond by reason of their weight, were constantly being floated to the surface and blown to powder by means of the gases generated by these organisms and without the slightest smell. A paddock was flooded with the effluent, and in the course of an hour the whole party walked over it without the slightest discomfort.

The cattle on the farm looked healthy and well, and we were informed always fetched the best prices.

If the storm-water could in any way be separated from the sewage, and the settling-ponds properly formed and aerated, Christchurch, I consider, would have solved, in a great measure, the difficulty which confronts all large centres: how to dispose of its sewage without danger to the health of the community and with some profit to the Corporation.

*Dunedin.*—The greatest and most evident defect and offence against sanitary laws in this city is the method of disposing of the sewage. Ever since a system of reticulation has been adopted the whole effluent has been discharging into the harbour without any treatment whatever, the result being that the entire foreshore is saturated by sewage, which, when the tide (which recedes for a considerable distance) is low, constitutes an offence to the senses, as well as a danger to public health. A palliative remedy which could be applied, by removing the present outlet to a point below low-water mark, is negated by the (natural) objection on the part of the Harbour Board to have their channels filled up by the depositions from the sewage and storm-water of the town, though they do not apparently object to have their foreshore reclaimed for them by the same method.

There is no remedy for this state of things, and no method of diminishing this grave sanitary defect without having resort to a complete drainage scheme, having for its purpose the collection and removal of all sewage from further deposition on the shores of the harbour.

To give proper effect to any drainage scheme that may finally be determined upon for Dunedin there is one thing essential, viz.,—the amalgamation of all the suburban boroughs into one Drainage Board, or Board of Health. In the case of Dunedin there arises the question as to whether the whole of each suburb should be included in such Board, or whether the area included of each borough should be determined by the physical condition or watershed of each.