

sanitary works that have been undertaken in the district are a great credit to the pioneers in sanitation, and that they would be "equalled by few and surpassed by none" if compared to the sanitation of any other district, especially when it is remembered that the majority of these sanitary works have been accomplished in the natural way of sanitary evolution, and have not been brought about by any system of propulsion or compulsion, which has long been in force in England.

Every one knows the fierce opposition that has to be faced when any sanitary improvement that costs money is proposed. In the first stage of sanitary evolution the communal system of collecting nightsoil is proposed instead of the individual method of disposing of it on the section. Indignation meetings are held to protest against this interference with the rights of the individual, and against the intrusion of the nightsoil-collector on private premises. Similar protests are generally raised when any other sanitary improvements, such as sewerage schemes and public water-supplies, are first proposed. In spite of these protests on the part of objectors to improved sanitation, I think it may be concluded that sanitary progress in the Hawke's Bay District has, on the whole, kept pace with the increase in the population. It is true that there are exceptions, and that mistakes have been made in some of these schemes for drainage which have been constructed in the past; but these mistakes are often simply due to the fact that sanitation has in all countries advanced so rapidly in recent years that what is recognised as right to-day appears an obvious mistake that could have been avoided to-morrow. So much for the general descriptions of the existing sanitary state of the district. Other details will be alluded to below.

THE MEASURES THAT HAVE BEEN TAKEN TO IMPROVE THE SANITATION OF THE DISTRICT AND THE MEASURES THAT ARE NECESSARY AND DESIRABLE IN THE FUTURE.

I must emphasize the fact that in the short period of six months it is undesirable to make any sharp distinction between those measures which have been recommended and have been carried out and those measures which have been recommended, or which it is desirable to recommend, but which have not yet been actually carried out.

House-drain Connections.—All local authorities in whose district there is any sewerage system have been supplied with sketches, and the model by-laws of the Local Government Board in England, showing the recognised way of making house connections by inserting a disconnecting trap between the house-drain and the sewer and ventilation of the house-drain. The importance of applying the water test to all drains before they are approved has been emphasized. Inspector Kershaw has gone to superintend the first installation of any new house-drain according to these by-laws, so as to show practically the method of carrying them out.

Plumbing Specifications.—Inspector Kershaw, late instructor and lecturer in plumbers' work at the Manchester and Bury Municipal Technical School, and examiner at the Wellington Technical School, drew up, at my request, detail drawings and specifications regarding soil, waste, and vent pipes, and the connections to sanitary fittings, including water-closets, lavatories, baths, and urinals. Copies of these specifications have been sent to some of the local authorities, and it is to be hoped that all new sanitary fittings will in future be constructed according to these specifications.

There is no doubt that sufficient attention has not been paid to the details necessary in the proper laying of house-drains and the connection of sanitary fittings by local authorities in the past, as not one of them had adopted the plan recognised by the Local Government Board in England; and I think that it is only fair to assume that, in spite of all the controversies and frequent changes in the details, this is the best system to follow at present. Though the importance of disconnection and ventilation of the house-drains cannot perhaps be exaggerated, another point equally important is the making of watertight joints; unfortunately I have been driven to the conclusion that this error in laying drains has been a frequent occurrence, and that it will continue to be so in future unless every drain is tested by the water test before it is approved.

Boroughs.

Woodville.—The wooden sewers of Woodville have served their purpose well as far as surface-drainage is concerned; as they are not the best adapted for the carriage of slops, it is desirable that any extension of the system and any new connections should be made by pipe drains. Additional ventilating-shafts to ventilate the sewer have been erected.

Dannevirke.—The population of this town is rapidly increasing, and though it has an excellent water-supply, and concrete channelling has been put down in the main street, which on one side receives the slops, and is continually flushed by water (the other side of the street is not benefited owing to the fall of the ground), it is a serious question whether the town is not lagging behindhand in its sanitary evolution through not adopting a drainage scheme. At present no bad effects have been experienced. The town has been free from typhoid and diphtheria in spite of several nuisances existing from the present method of disposal of slops. There is no doubt that it will be only a matter of time before the town suffers owing to the absence of drainage. A drainage scheme has been drawn up and estimates prepared by Mr. Leslie Reynolds, who carried out the water-supply for this town. I believe the main reason why the scheme has not been adopted is that the borough is divided into three wards, and that while these wards exist any drainage scheme that is suitable for the town, irrespective of its division into wards, must be consented to by all three wards, and that though the wards would all help to contribute to the general scheme they would not all equally benefit by it. If the division into wards was abolished the drainage area could be defined, and a special rate struck only over that area. In December, 1901, a poll of the Central Ward decided against a drainage scheme confined to that ward. If the poll had been carried there would still have been the difficulty of carrying out a scheme suitable for the whole borough, but for which the Central Ward would alone have had to