

the agency of small organisms—the so-called nitrifying organisms—and as these minute scavengers live only in the superficial layer of the soil, the inutility of burying such matter at the depth of, say, 6 ft., 7 ft., or 8 ft. is at once seen. The proper way to dispose of nightsoil is by placing it about 1½ ft. beneath the surface. By continually changing the place of deposition every opportunity is given these organisms of doing their beneficent work. The destruction of faecal matter treated in this manner is very rapid. In the course of some three, four, or five days—should the soil be of the proper loamy description—absolutely no trace of nightsoil can be detected.

From the individual who has enough surrounding ground to dispose of all such matter by burying it, we come to a section of the community who, while they have quite outgrown this method of disposing of nightsoil, by reason of the increase of the population, still persist in its practice. In many cases the persistence is not so much the fault of the individual himself, but is due to the inertness and want of progressiveness on the part of the local authority in whose district he resides. All over the Colony of New Zealand there can be found places where the residents, with houses situated on an eighth and sixteenth of an acre, are forced, by want of a common system, to continue this insanitary method of disposal. When we remember that the people resident on these small areas have not only to dispose of their nightsoil, but often also to draw their water-supply from the same small place, the chances of their obtaining pure water are, as Mr. Snagsby would say, “not to put too fine a point upon it, rather remote.” The department has been urging upon all local authorities having control of tenements situated upon such areas the absolute necessity of at once instituting a system whereby the nightsoil can be removed at regular, and not infrequent, intervals. Most local authorities are able to see not only the advantage, but the necessity, of doing so.

If there is one thing more important than another in the carrying-out of a system of collection of nightsoil, it is that the kerosene-tins and the oil-drums must give way to a properly constructed pan. In the first place, the kerosene-tin is never properly cleaned. Filth accumulates and the place smells, and, consequently, depreciation of health results. The only way in which this system can be carried out, without nuisance and danger to the health of the people, is by means of the so-called “sealed-pan system.” This system, described shortly, consists in a properly constructed enamelled pan. Once a week the contractor removes this pan to the depot, leaving a clean pan in its place. In order that no nuisance may arise—such as frequently takes place when nightsoil is removed in open vessels—a lid is placed upon the pan which, practically, hermetically seals it. There is no danger with these pans. They can be carried through the streets without causing any nuisance, or giving rise to any complaint. The pans are emptied at the depot, cleansed, disinfected by steam, and are ready for the next service. The contents of the pans may be taken either to the destructor where such exists, or to the depot where it is spread upon the land and ploughed in daily.

#### CONSUMPTION.

That it might have been better to have waited for another year, when data from amongst our own people could have been obtained and submitted for your consideration, before dealing with the question of consumption, I do not deny; but the desire felt by all the civilised world that something ought to be done will, I think, justify what otherwise might seem a premature suggestion.

The recent pronouncement by Dr. Koch at the Congress lately convened in London for the consideration of how best to limit the ravages of this all-prevalent disease has, to say the least, disturbed the scientific world. Until a few weeks ago there was not, I suppose, a single individual who would in speaking of consumption have considered it necessary to attempt to prove that human and bovine tuberculosis were due to one and the same organism. Now all this is changed; but while it would be in the highest degree impertinent to doubt the truth of any statement made by so distinguished a bacteriologist, there is no need, it seems to me, to alter our plan of campaign until at least further data is supplied.

The attitude of the ordinary individual, no less than that of the scientific world, has undergone a remarkable transformation during recent years. Time was—and that not so long ago—when to tell a patient that he had consumption was considered tantamount to telling him to put his house in order that he might be ready for the end which was not far off. It is not so now. *Post-mortem* examination has shown us that not nearly all who have suffered from tubercle of the lung die of that disease, while from the discovery and subsequent observation of the particular entity which causes the disease, and the conditions which favour its development, there has been evolved a more scientific and beneficial mode of treatment.

No longer is it considered necessary to close up every outlet through which fresh air can reach the invalid in order to help him in his search after health. The old order has given place to a new and more enlightened one. Fresh air and sunlight have taken the place of the close room and overcoats.

It is not, however, upon any line of treatment *per se* that we must congratulate ourselves most, but rather to the altered attitude which has been taken up all along the line in respect to this modern scourge. That prevention is better than cure is a true, if a trite saying, and it is in this direction, as well as the others, that our efforts as a department of State ought to be directed.

The factors which go to make up that sum which is termed “predisposition” and “predisposing causes” are many, and, fortunately, a few of them are capable of removal. The masterly investigation of the late Dr. Buchanan into the relation which exists between a damp subsoil and phthisis has demonstrated a truth of a far-reaching and valuable character. He demonstrated beyond all doubt that a lowering of the subsoil-water was always followed by a decrease in the mortality from consumption. It has been found that by draining the soil the temperature in summer is raised as much as 3° Fahr., which is in effect the same as transporting the land 150 miles nearer the equator.