

**MODERN METHODS OF
SEWAGE DISPOSAL FOR
TOWNS, PUBLIC INSTITUTIONS
AND ISOLATED HOUSES**

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Modern methods of sewage disposal for towns, public institutions and isolated houses by Geo. E. Waring

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GEO. E. WARING

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BY

GEO. E. WARING, JR., M. INST. C. E.



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In the preparation of this book, it has been attempted to bring into convenient form, and within moderate limits, the more important results of the study and experience of many engineers, chemists, and biologists who have within the past quarter of a century exploited the various methods of sewage disposal. These results are set forth in a voluminous literature, and are clouded with much speculation and conflicting testimony.

It would not have been possible, even five years ago, to state with certainty some controlling principles which are now firmly established, and which are supported by the most successful practice of the past. That practice was based on empirical knowledge, and was the outgrowth of tentative effort. Little by little, it has been justified, elucidated, and corrected by scientific investigation, — notably at the hands of Schloessing, Frankland, Warrington, and the corps of able men who have conducted the experiments of the Massachusetts Board of Health at Lawrence. These experiments were more complete than any that preceded them, and their outcome has been more practically conclusive: they must be of world-wide good effect.

In one sense, the art of sewage disposal is now only at the threshold of its real success, for only now can we work

in the full light of day, divesting old processes of their defects, and devising new processes in accord with established knowledge.

While it is hoped that these pages will have some value and will offer some suggestion for engineers, they have been written with a view, as well, to the information of sewerage-committee men and others who may have occasion to look at the subject from the layman's point of view.

Especial attention is given, in the last two chapters, to the needs of isolated buildings, now so universally dependent on the noisome and death-dealing cesspool, which is, *facile princeps*, the great sanitary curse of the country.

The chapter on Chemical Treatment (XV.) owes its arrangement and its completeness to my secretary and friend, Mr. G. Everett Hill, whose untiring research and discreet selection I desire most cordially to acknowledge.

G. E. W., JR.

NEWPORT, R.I.,
April, 1894.

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