

**HINTS ON THE WATER
SUPPLY OF SMALL
TOWNS AND VILLAGES**

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Hints on the Water Supply of Small Towns and Villages by L. L. Macassey

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OF
SMALL TOWNS AND VILLAGES

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PREFACE.

WITH the exception of the chapter on Hydraulics, the following pages are intended for general readers. Much of the matter has already appeared, but in so technical a form as to be entirely useless to all but Engineers. An attempt has been made by the author to state, in a concise and simple manner, the leading principles of Water Supply. Much of the opposition to Sanitary Reform is due to selfishness and ignorance, and it is hoped that these pages may assist in removing such impediments by showing that an ample supply of good water is essential, and well worth paying for.

Prior to the passing of the Public Health (Ireland) Act, 1874, many difficulties existed in the way of water supply to small towns and villages. A few of the towns were under the control of Commissioners, whose exertions seldom went beyond the cleansing of the streets and such sewers as existed. A dread of high rates prevented any attempt being made to introduce water for domestic use, and nothing was done, save, perhaps, the sinking of a few wells. In the villages matters were quite as bad, if not worse. Here the Grand Jury had the control of the streets and drains, and the inhabitants had to draw their supply of water from the neighbouring streams and springs. Such was the state of things existing when the Public Health Act came into operation; and though there has not yet been sufficient time to judge by results, it is evident that in many important particulars the provisions of the Act will prove highly beneficial, more especially in the country districts.

Under the provisions of the Act, the Board of Guardians of each Poor Law Union is constituted the Sanitary authority of the district, and of all towns therein, with the exception of those having a population of more than 6,000, or those having Commissioners acting under local Acts. The Act further provides that the Sanitary authority may supply places within its district

with water, or may contract with persons or companies to furnish the same; compulsory powers are also granted for the acquisition of lands and water rights.

With a view to the proper carrying out of the provisions of the Act, certain officers are appointed by the Sanitary authority. These are the Sanitary officers (the Dispensary Doctors), the Executive Sanitary officers (the Clerk of the Union or his Deputy), and, in certain cases, a Superintendent Medical Officer of Health. It is the duty of those officers to take cognizance of all Sanitary matters embraced in the Act, and, where requisite, to bring them under the notice of the Sanitary authority.

Of all the matters thus brought forward, the most important is Water Supply. This may refer to the quantity or quality of existing supplies, or to the question of supply to districts entirely deficient in such. In the discussion of such questions, the Sanitary authority has the assistance of the District Inspectors of the Local Government Board, gentlemen thoroughly versed in Sanitary science. When improvements have been decided on by the Sanitary authority, the Local Government Board, by their Engineer, examines into the details of the case, and decides whether the plans proposed are likely to prove efficient or otherwise, and advises the Sanitary authority accordingly. With such machinery for obtaining information of a reliable character, it is evident that improvements will not be entered on without a good prospect of success, and ratepayers may therefore rest assured that their money will not be spent rashly, nor without due inquiry.

The question of Water Supply is one which will present many points of difficulty to Guardians and Sanitary officers. To many the subject is entirely new, and though in the more important cases professional assistance is called in, yet a general knowledge of the subject will be found most useful by those charged with the investigation and carrying out of schemes of improvement. To give this information, and thus supply a strongly felt want, the present work is brought forward, and it is hoped it may prove serviceable in this respect.

Belfast, 1877.

HINTS ON WATER SUPPLY.



CHAP. I.—INTRODUCTION.

The following "Hints" are issued with the view of ^{Object of the} throwing some light on a most important subject. Sanitary ^{Treatise.} reform is now the question of the day, and its leading item is Water Supply. Progress in this department has hitherto been confined to the large towns, where means were available for the construction of useful though necessarily costly works. The inhabitants of the smaller class of towns and villages have been left to their own individual efforts, whilst the lack of funds and rating powers has put a veto on improvements, and crippled the efforts of those anxious for the public good. This difficulty has now been removed, and Ireland stands on the same footing as the sister kingdom. The Public Health Act has put it within the power of the various local authorities and Boards of Guardians to provide a supply of water, either supplemental or otherwise, to the towns and villages within their districts. In fact, the matter is not left optional with the local authorities, but is made compulsory; and neglect or delay in carrying out the provisions of the statute, is wisely anticipated and provided for.

In deciding on the best means of supplying a town with water, professional advice and guidance is essential. Hence it is not to be understood that these "Hints" are put forward in lieu of such advice. In many cases, when an engineer is called in to advise on matters of water supply, he is compelled to ground his opinion, and frequently design his scheme, on the information and data put before him by local authorities or their officials. This is frequently the