

WATER SUPPLY

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Water Supply by J. H. Balfour Browne

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BY

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WATER SUPPLY.

IN most cases the first words of an essay are an excuse for its being written ; but we cannot think that an honest endeavour to collect and place on record any facts or important opinions respecting Water Supply can require an apology. The subject is one of paramount importance. It is one which has not only a close connection with prophylactic medicine, but with sanitary legislation. In its medical aspect it has become more important as the science of sanitation has become more certain ; and in these days, when legislation is willing to follow closely on the heels of science, instead of taking its own free and ignorant way, as it used to do, it is every day becoming more vital as a question of practical law-making. Water, which used to be the luxury of the few, has now become the necessity of the many. Its importance as an agent of health has been more thoroughly appreciated in recent years, and uses are made of it to-day which would only have been shuddered at by our less cleanly ancestors.

Formerly men were left to secure water or do without it, as they chose, and no duty was thrown upon any administrative authority to see that those whose interests they had to watch over had a supply.¹ The Public Health Acts of 1848 and 1875, authorised local authorities to provide their districts with water in case there was no existing supply in the hands of a Parliamentary company, and still more recently an Act of Parliament² has made it incumbent upon every Rural Sanitary Authority, "to see that every occupied dwelling-house within their district has within a reasonable distance an available supply of wholesome water sufficient for the consumption and use for domestic purposes of the inmates of the house." They are, too, to see that no house is built within their district without an available source of supply being secured to it, and the Local Government Board are empowered by Section 11 of that Act, to invest any Urban Sanitary Authority with the powers or duties given to or imposed upon a Rural Sanitary Authority under that Act.

At the same time that the necessity of a supply of

¹ The amount of benefit which has resulted to public health from the execution in towns of drainage works and works for the supply of water may be seen from an instructive table which is given in one of the Reports of the Medical Officer of the Privy Council, Dr. Buchanan, who seems to have made the investigation, concludes his report by pointing out that the progress made by the inhabitants of most of the towns in decency, cleanliness, self-respect, and morality was at least as striking as the improvement in their health measured by the morality returns, an observation which bears out the view we have long held,—that water is a great moral agent as well as a great physician.

² Public Health (Water) Act, 1878 (41 & 42 Vict. c. 25, sec. 3).

water has become a recognised fact in the public mind, the necessity for the selection of pure sources of supply, and the careful scrutiny of our means of distribution, have become more generally admitted. It has been said that every virtue has its attendant vice, and it would seem that every sanitary boon has its attendant morbid influence. A refuse pipe, as generally constructed, while it carries away the filth of a household, makes its bedrooms coterminous with the deadly purlieus of a drain system. A water supply which gives us a beverage which may sparkle on our tables, may be the means of conveying to us the seeds of deadly disease. All these considerations would seem to be sufficient reason for discussing some questions relating to water supply with what care we can bestow, and with the light of such authorities as we may be in a position to command.

It is scarcely necessary to point out that we have to look to rain for all the water we can utilise for any purpose. The clouds drink from the sea and the moist land, and return their moisture here and there in the form of rain or snow. But without going thus far back into the genealogy of water, we may say that we depend for our supplies upon the water which runs from the surface suddenly after rain has fallen, which we call surface water; upon rivers, which are fed by this surface water, by water which has been absorbed by the earth and is given out again in the form of springs, and by water which was caught in hollows or spongy places, and which wells out from these slowly; and thirdly, upon springs themselves; and we may either find these