

day that, while gas for many purposes will hold its own, illuminants as good for domestic requirements promise to attain practical success and introduction, may result in lower cost in the near future. The wonderful developments also of recent years in electric lighting promise almost surely to largely supersede gas, not only in large institutions, but also in public and private buildings of all kinds. At present electric light for these purposes is not less expensive than gas, and hardly less dangerous as regards fire; but no doubt whatever seems to exist that in a comparatively few years it will be as easily attainable as, and more economical (as it is already more satisfactory) than gaslight, and that its risk of life and fire from the highly-charged wires will be reduced to a minimum, while it will also supply heat. When these certain heights of success are attained they might be advantageously introduced in New Zealand, and the gas-bill will become a much less formidable item.

Water.—Although not nearly so heavy an item as gas, the amount paid for water approaches £2,000 per annum. According to local custom, the charge is sometimes by general rate, sometimes by meter rate, and sometimes by general average rate; and there does not appear to be any prospect of, or much advantage in, establishing a uniform system of charge as regards public buildings throughout the colony. The conditions of supply and use are so multifarious and varied that it is difficult to take any other steps than continually to impress upon officers the duty of economizing the consumption, and the avoidance of that unnecessary, often reckless, and always careless, waste which is so common a practice; to endeavour to keep all services in a sound and tight state; and to regulate the conveniences for waste, which are not seldom in excess of actual requirements. A distinct economy has been attained by the passage last session of the Wellington City Empowering Act, under which the Corporation charge for water was reduced materially, both for ordinary use and machinery. The consumption in Wellington is naturally exceptionally large, and, as the Act has only been in operation for a portion of the past year, its effect will be still more beneficially felt in this year's accounts.

The consumption at large asylums is nearly always the heaviest single item in all countries, unless they are provided with their own supplies. In New Zealand this is fortunately the case as regards Seacliff, Sunnyside, and Porirua. Mount View shares in the advantage of the decreased Wellington rate, but Avondale pays very heavily for its water from the Corporation reservoirs, being a very large institution, and requiring the ordinary average supply per head to be exceeded on account of the northern climate. The utilisation of the excellent springs which rise in the grounds of the institution would well repay the necessary first cost; and, as the water is of exceptional purity, there are additional reasons why it should not be allowed to run to waste. It should be added that the Medical Superintendents of these large institutions, without exception, display an earnest desire to keep down consumption to the limit compatible with the admittedly heavy requirements of an asylum.

In water, as in gas, the rapid growth of the community and frequent inauguration of new water-supplies are causes of an ever-increasing expenditure that must tend to outbalance the comparative effect of even the most economical use. It is also the case with water, as with gas, that it is far more difficult to get public servants to practise that economy at their offices which they would be the first to observe and inculcate at their homes.

FIRE-PREVENTION.

The question as to what attitude should be taken up as regards the possibility, probability, and inevitability of fire opens up a question of the first magnitude and importance, and deserving the most earnest and serious consideration. It was very exhaustively and carefully investigated by the Public Works Department in 1887, and a brief *résumé* of the results, which have not hitherto been generally known, cannot fail to be of interest.

In 1887 the Government decided to ascertain what insurance of some of the more important buildings would cost. The Government Actuary (Mr. Frankland) calculated that though it was generally sound policy for the Government to be its own insurer in view of the number of its risks, yet the basis was disturbed if any of the risks were very excessive as compared with the general average risk.

The following were selected:—Stone or brick buildings: Lunatic Asylums at Avondale, Sunnyside, and Seacliff; Supreme Court Buildings Auckland and Wellington; and Provincial Buildings, Christchurch. Wooden buildings: Auxiliary Asylum, Avondale; Mount View Asylum, Departmental and Parliamentary Buildings, Government House, and Museum, Wellington. The amount at which the valuations, less £5,000 own risk, determined the insurance of these should stand was £339,000.

All the insurance companies doing business in the colony were invited to offer risks, and, after considerable correspondence and negotiation, their ultimate proposals were worked out to cover only £233,000 of the above amount, and to represent an average rate of 14s. per cent. This was satisfactory neither as to amount nor rate, the one being too little and the other too high, and the question was reserved for further consideration.

Subsequent inquiries led to an estimate that the gross value of all Government buildings in the colony, including those of the railways, in 1888, amounted to £3,500,000, the insurance on which, even at an average rate of 10s. per cent., would be represented by £17,500. On the other hand, a detailed estimate of the losses by fire during the ten years 1878–88 amounted to £52,000, or an average of £5,200 per annum.

Even allowing a much larger average as for the later years of this period, owing to the increased number of buildings in the colony, and putting it at £8,750 per annum, the total insurance would have doubled the total loss. On these figures it appears to have been decided that economy remained distinctly on the side of the Government taking its own risks, and not insuring outside.